Accessibility@Mason

Guide to Creating Accessible Electronic Materials



GEORGE MASON UNIVERSITY | Assistive Technology Initiative

About This Guide

The Assistive Technology Initiative (ATI) at George Mason University designed this user manual to provide information and guidance for the creation and testing of e-learning materials (i.e., documents, websites, and videos), including step-by-step procedures for access and use.

Some handouts within this manual are provided courtesy of the © 2012 Project GOALS from The National Center on Disability Access to Education (NCDAE). These documents were made possible for public use by a grant from the Fund for the Improvement of Postsecondary Education (FIPSE), US Department of Education. For further information, please visit www.ncdae.org.

The ATI office operates under the Vice President for Compliance, Diversity, & Ethics at George Mason University in Fairfax, Virginia. For further information, please visit ati.gmu.edu.

Email: ati@gmu.edu
Phone: 703-993-4329
Twitter: @AccessibleMason

Who Should Read This Document:

Any Mason faculty and/or staff members, who manage, develop, or distribute e-learning materials for individuals within the Mason community.

How To Use This Document:

This manual was designed as a "just-in-time" resource to support Mason faculty and/or staff members with the creation of accessible e-learning content. As such, it consists of a series of one-page "cheat sheets" that provide step-by-step procedures for incorporating accessibility into commonly used software applications. This document can be reviewed in its entirety or individuals may pick and choose the "cheat sheets" that are most applicable to their current needs.

For example, a faculty member may only use PowerPoint and Blackboard in their course this semester. For that reason, they would only need to access the information specific to those tools while developing their course materials.

Table of Contents

Requesting Services from the ATI 5

Section I: Accessibility Laws and Policies 6
Accessibility Laws and Policies at George Mason University 7

Section II: Making Accessible Documents 8
Part I: Making Accessible PDFs 9
- Adobe Acrobat XI 10
- Adobe Acrobat X 11
- Adobe LiveCycle Designer 12-13
- CommonLook Office – Accessible Office to PDF Plug-In 14

Part II: Making Accessible Word Documents 15
- Microsoft Word 2011 (Mac) 16
- Microsoft Word 2007/2010 (PC) 17
- PDF Conversion in Microsoft Word 2007/2010 18
- MathType – Creating Accessible Math Equations 19

Part III: Making Accessible PowerPoint Documents 20
- Microsoft PowerPoint 2011 (Mac) 21
- Microsoft PowerPoint 2007/2010 (PC) 22

Section III: Web Accessibility 23
Part I: Identifying Web Accessibility Issues 24

Part II: How to Test Websites for Accessibility
- Free Testing Tools 25-26
- Page Title 27
- Accessible Links 28
- Headings 29
- Image Description (Alt Text) 30
- Accessible Tables 31

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Table of Contents

Forms Fields, Error Messages, and Direct Focus 32-33
CAPTCHA and Timed Responses 34
Color Contrast 35

Part II: Adding Accessibility to Content Management Systems 36
CommonSpot – Adding Labels to Form Fields 37
CommonSpot – Heading Structure 38
CommonSpot – Keyboard Accessibility 39
CommonSpot – Image Description (Alt Text) 40

Section IV: Bb and Bb Collaborate 41
Part I: Blackboard
Adding Headers in Blackboard 42
Adding a Table and Setting Table Headings 43
Adding an Image and Tagging/Describing 44
Adding a Description to a File 45
Adding a Video 46

Part II: Bb Collaborate Web Conferencing
Built in Accessibility Features 47-48

Section V: Lecture Capture Tools and Accessibility 49
Camtasia, Captivate, and Presenter Accessibility 50
Comparison Chart – Lecture Capture Accessibility 51

Section VI: Making Your Videos Accessible 52
Kaltura – Manually Add Captions to Your Kaltura Video 53
YouTube – Adding Captions Files or Transcripts 54
Vimeo – Adding Captions and Subtitles 55

Definitions 56-57

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Requesting Services from the ATI

To aid faculty and/staff with meeting the needs of their students with disabilities and ensuring compliance with providing equivalent access in the classroom, the ATI provides additional in-house options for creating accessible materials. Procedures for requesting additional services are as follows:

Need Handouts, Pamphlets, or other types of promotional materials converted into an accessible format (i.e., Braille, Large Print, Tactile graphics, electronic)?**

- Complete an Accessible Text Agreement form.
- Complete an Accessible Text Request form for **each** book/material.
- Submit all forms/materials to the ATI office

Need Captioning Services?

- Complete the online Accessible Media Request Form for each file needed.
- For bulk requests (e.g., 10 or more videos), feel free to use the BULK Request Form [Excel].
- Submit request form to the ATI office at least **7 days** prior to the date needed.

Need Audio/Video Description Services?

- Audio/Video description requests are reviewed on a case-by-case basis. Please contact the ATI directly at ati@gmu.edu to discuss this service.

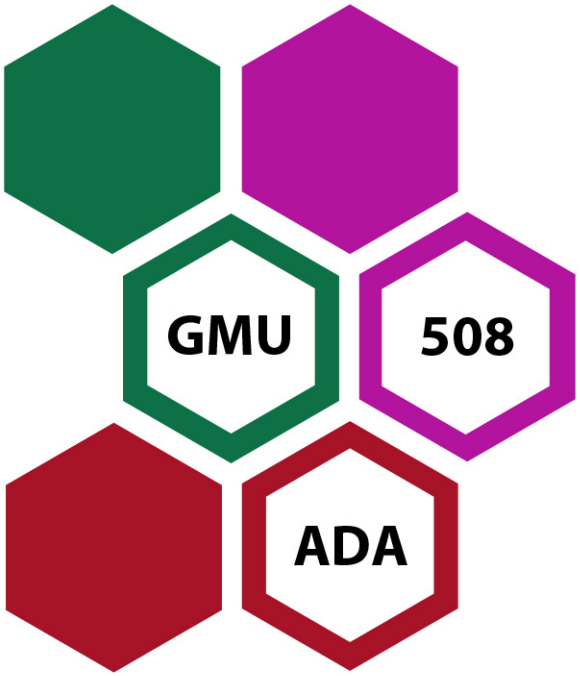
Need a Websites and/or E-Learning Applications Tested for Accessibility?

- ***For Mason Websites:*** Please complete our Website Evaluation Request form.
- ***For Non-Mason Websites and e-learning applications:*** Please complete our Accessibility Evaluation Request form.

** ***Please Note:*** *This service is only available for promotional materials, such as orientation packets, training materials, etc. that a department or unit would provide during commencement ceremonies, training, orientation, or similar type of event.*

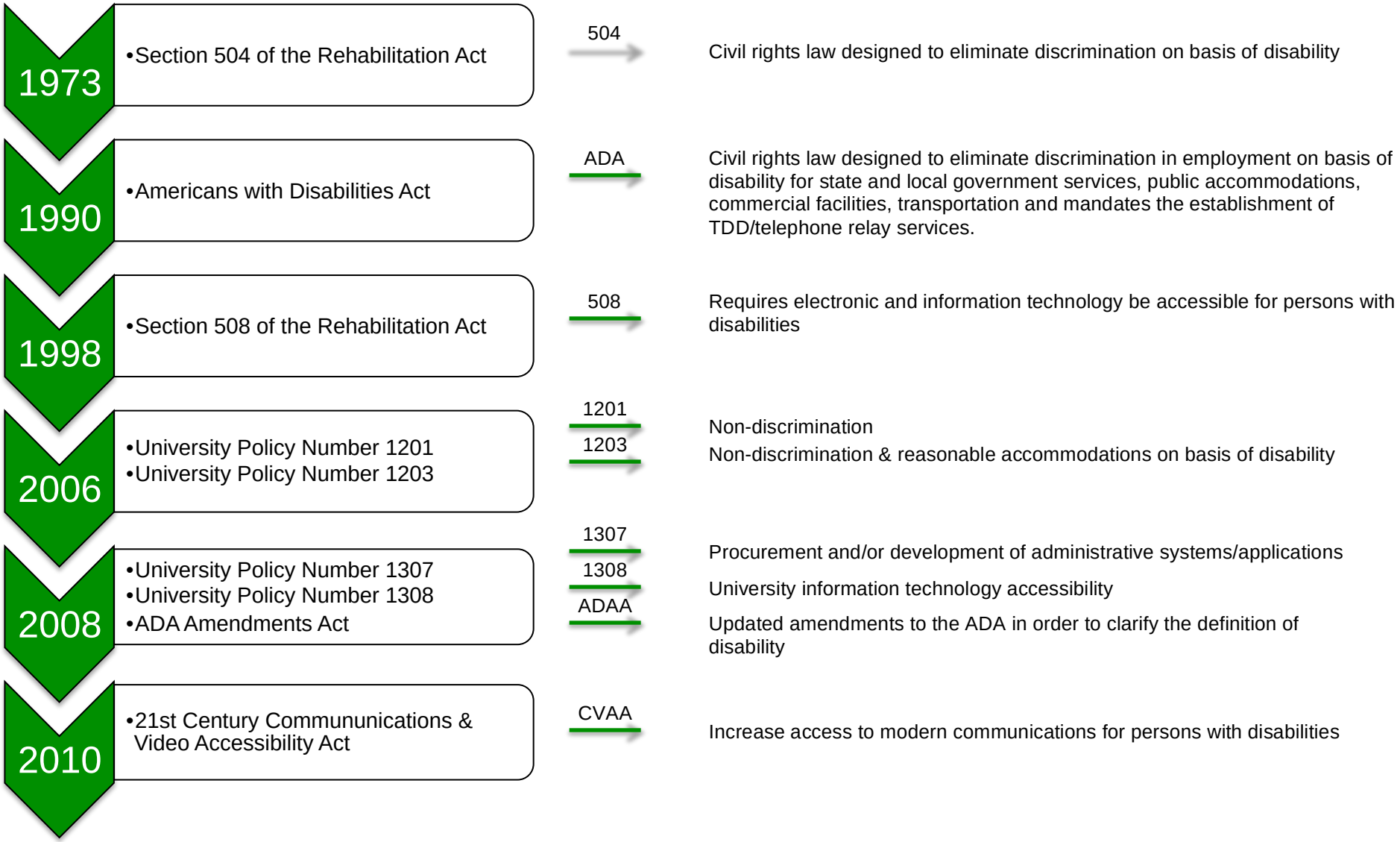
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Accessibility Laws and Policies



In this section, a brief overview is provided of the relevant disability laws and university policies, as well as their impact at George Mason University.

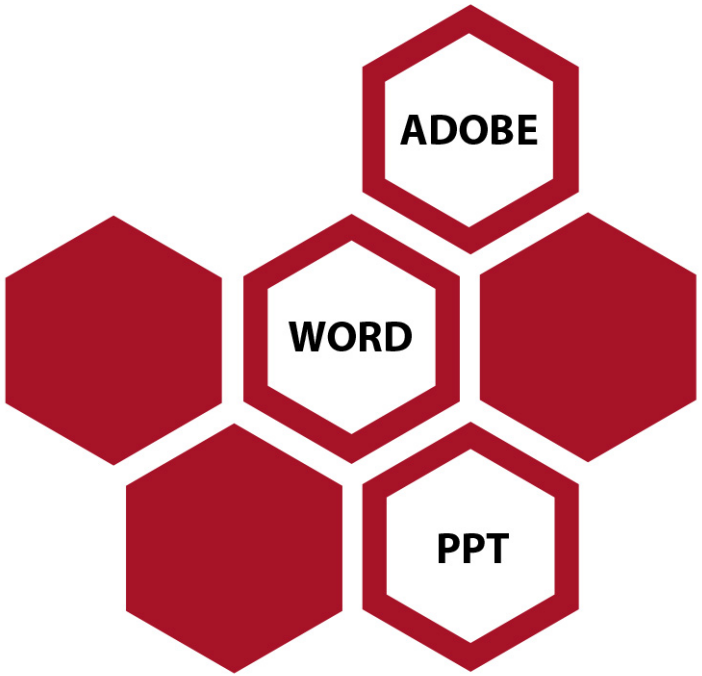
Accessibility Laws and Policies at George Mason University



Contact us at ati@gmu.edu *or 703-993-4329*
2-24-2014

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Making Accessible Documents



In this section, specific tips and strategies are provided on how to create documents (i.e., **Adobe**, **Word**, and **PPT**) that are accessible to individuals with disabilities.

Additionally, accessibility tools and simple techniques are discussed to help you identify and remediate common accessibility errors in your documents.

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Making Accessible Adobe Documents



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Contact us at *ati@gmu.edu or 703-993-4329*
2-24-2014

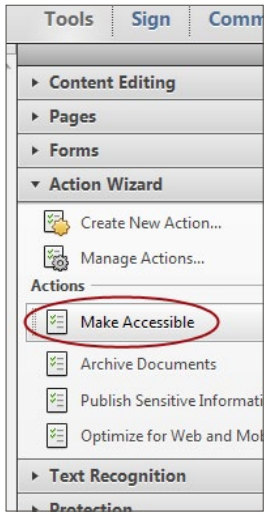
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CREATING ACCESSIBLE PDF DOCUMENTS IN ADOBE ACROBAT XI

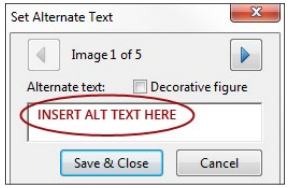
GOALS

1. Run "Make Accessible" wizard

Select ***Tools*** from the upper right corner, then select ***Action Wizard*** > ***Make Accessible*** from the sidebar. Select ***Start*** button.



1. ***Add Document Description*** – Enter a descriptive page ***Title.*** Other fields are optional.
2. ***Set Open Options*** – Runs automatically
3. ***Recognize Text using OCR*** – If your PDF is not ***true text,*** it will be converted into true text during this step. If you are not sure if your PDF is true text, one easy test is to ***search for a word*** that you know occurs in the document. If no results are found, it needs to be ***converted*** to text.
4. ***Detect Form Fields*** – Only necessary if your page contains ***fillable forms.***
5. ***Set Tab Order Property*** – Runs automatically
6. ***Set Reading Language***
7. ***Add Tags to Document*** – PDF "tags" provide accessibility information to ***screen readers.*** If your document ***does not have tags*** they will be added during this step. You will need to check the quality of these tags later on.
8. ***Set Alternate Text*** – A window will appear that allows you to ***add alternative text.*** Use the arrows to move between images and check ***Decorative figure*** if the image should be ***ignored*** by a screen reader.

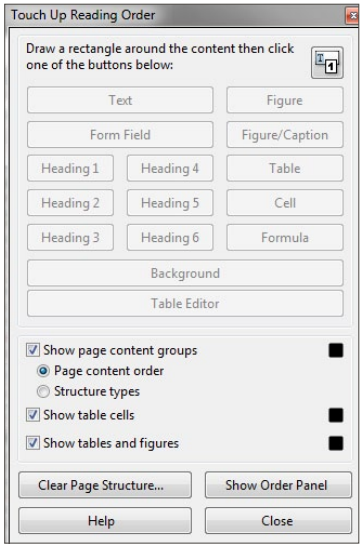


9. ***Run Accessibility Full Check*** – This checker will show additional issues. Right click errors and warnings and select ***Fix*** to address the issues, ***Skip Rule*** if the issue has been addressed, and ***Explain*** to read online help.

2. Add/Change tags

The ***TouchUp Reading Order*** tool allows a user to quickly ***add and edit PDF tags*** and ***view the reading order*** of elements on the page. To edit tags, do the following.

1. From the right-hand menu, select ***Tools.***
2. Then select ***Accessibility > TouchUp Reading Order.*** If the Accessibility option is not listed, use the ***Options*** button to check ***Accessibility*** on the menu.
3. When selected, the view on the screen changes. All of the content is enclosed in numbered boxes. Each of these boxes represents a tag and the number corresponds with the reading order in the ***Order panel.***



4. Select the ***Structure Types*** radio button. The page will now display tag types instead of reading order.
5. Within the ***TouchUp Reading Order*** window you will notice a group of buttons with the names of several common tags. You can use these buttons to assign tags to selected text or objects. Use the ***Text*** button for body text and the ***Heading 1-6*** buttons to assign correct heading levels.

You can also add/edit the following tags in the ***TouchUp Reading Order*** tool:

Images and alternative text

1. To tag a part of the page as an image, drag a box around the image and select the ***Figure*** button.
2. To add or change alternative text, ***Right click*** on the image, select ***Edit Alternate Text.***
3. Enter the appropriate alternative text in the dialog box.

Table headers

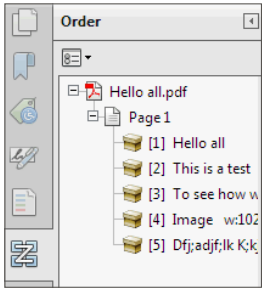
1. Select a table and then select ***Table Inspector.*** Table header cells will be identified in red.
2. ***Select a table or cell*** by dragging a box through the cells (not around them or you might select additional cells). ***Right click*** on a selected cell(s) and choose ***Table Cell Properties.*** A dialog box will appear.
3. If the selected cell(s) needs to be tagged as a header, select the ***Header Cell*** option and assign a scope of either ***Row*** or ***Column.***

Move items to/from the background

1. Select an element you wish to move to the background (i.e., it will be ignored by a screen reader) and press the ***background*** button. This may include repetitive headers or footers.
2. If a part of the page is not in a gray box then it is already in the background. If it should be read by a screen reader, select the item and press the ***appropriate button*** (e.g., Text, Heading 1-6, Figure).

3. Check/edit reading order

The TouchUp Reading order tool can also allow you to ***change the reading order of the page content*** so it matches the visual reading order.



1. Select the ***Page Content Order*** radio button. Reading order will now be displayed in the page instead of tag type.
2. Select ***Show Order Panel.*** The Order Panel will appear in the left sidebar with numbers that correspond to the numbers in the page.
3. To change the reading order of an element in this panel, ***click and drag*** the tag to the location that reflects the correct reading order.

Note

It is easier/better to make documents accessible ***as they are created.*** See our other cheatsheets to make documents accessible in MS Word, PowerPoint, and InDesign.

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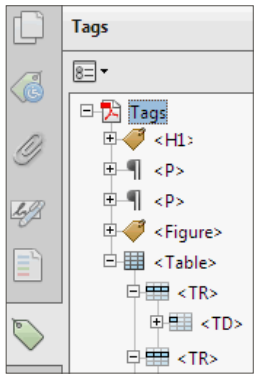
Made possible by a grant from the Fund for the Improvement of Postsecondary Education (FIPSE), US Department of Education. No official endorsement implied.

CREATING ACCESSIBLE PDF DOCUMENTS IN ADOBE ACROBAT X

GOALS

Tags Pane

PDF tags provide accessibility information to screen readers. They should not impact the look of the PDF. ***To view and edit tags,*** do the following.

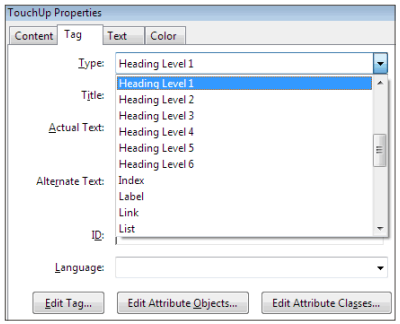


1. Select ***View > Show/Hide > Navigation Panes > Tags.***
2. Select the ***Options menu*** > ***Highlight Content.*** This allows you to see what content is associated with a tag.
3. In the ***Tags*** panel, expand ***<Tags>*** and ***<Sect>*** to view and navigate your list of tags.
4. Navigate through the tags using the ***up/down*** arrow keys, and expand and collapse tags with the ***left/right*** arrow keys.

Find Tag From Selection

1. Click the ***Select Tool icon*** and select a portion of text, an image, or a table.
2. Select the ***Options menu*** at the top of the Tags panel and then select ***Find Tag From Selection.*** The appropriate tag will be highlighted in the tags panel.

Modifying Tags



1. Right-click the tag you want to change and select ***Properties,*** and then the ***Tag*** tab.
2. Selecting the appropriate new tag type from the dropdown list labeled ***Type.***

Tagging an Untagged Document

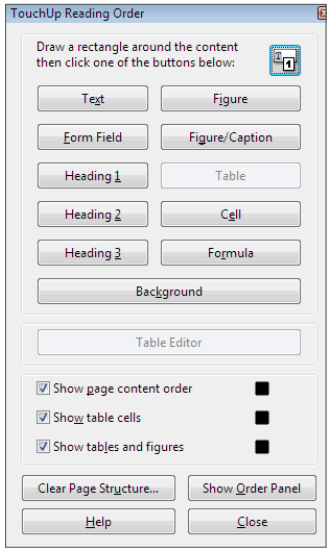
1. To add tags to an untagged document, choose ***Tools*** from the right-hand menu.
2. Select ***Accessibility > Add Tags to Document.***

TouchUp Reading Order

The TouchUp Reading Order tool allows a user to quickly ***add and edit PDF tags*** and ***view the reading order*** of elements on the page.

TouchUp Reading Order Tool

1. From the right-hand menu, select ***Tools.***
2. Then select ***Accessibility > TouchUp Reading Order.*** If the Accessibility option is not listed, use the ***Options*** button to check ***Accessibility*** on the menu.
3. When selected, the view on the screen changes. All of the content is enclosed in numbered boxes. Each of these boxes represents a tag and the number corresponds with the reading order in the ***Order panel.***
4. Within the ***TouchUp Reading Order*** window you will notice a group of buttons with the names of several common tags. You can use these buttons to assign tags to selected text or objects.

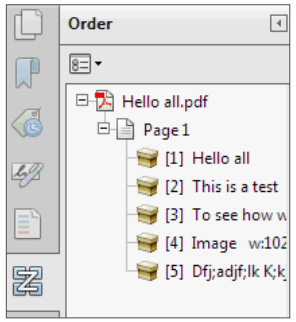


Adding/Changing Tags

1. To select content that needs editing, drag a box around an element using the ***crosshairs cursor*** or select everything within a box by clicking on the ***number in the top-left corner.***
2. Once you have selected a new element, you can assign some of the most common tags to that element by ***clicking on one of the buttons*** (e.g., "Heading 1"). Acrobat will place the selected content in the appropriate tag.
3. Assign alternate text to images by ***right-clicking*** on the image and choosing ***Edit Alternate Text.***

Order Panel

The order panel allows you to ***change the reading order of the page content*** so it matches the visual reading order.



1. To open the Order panel, select ***Show Order Panel*** in the ***TouchUp Reading Order*** tool.
2. To change the reading order of an element, ***click and drag*** the tag to the location that reflects the correct reading order.

Alternative Text

When an image is tagged as a ***figure*** the alternative text appears ***over the top of the image.***

1. To add or change text, ***Right click*** on the image, select ***Edit Alternate Text.***
2. Enter the appropriate alternative text in the dialog box.

Table Inspector

The Table Inspector allows you to ***easily identify*** and ***assign scope*** to table headers.

1. With the ***TouchUp Reading Order*** tool open, select a table and then select ***Table Inspector.***
2. ***Right click*** on a selected cell(s) and choose ***Table Cell Properties.*** A dialog box will appear.
3. If the selected cell(s) needs to be tagged as a header, select the ***Header Cell*** option and assign a scope of either ***Row*** or ***Column.***

Artifacts

Artifacts are elements that are ***ignored by a screen reader.*** Important text should ***never*** be labeled as an artifact.

1. With the ***TouchUp Reading Order*** tool open, select an element you wish to change to an artifact and press the ***background*** button. Or right click on an item in the ***Tags*** panel, and select ***Change Tag to Artifact.***
2. To search for artifacts, go to the ***Tags*** panel and select ***Options > Find.*** Artifact is the default search option, so click ***Find.***

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*For more information go to **www.ncdae.org/goals***

Made possible by a grant from the Fund for the Improvement of Postsecondary Education (FIPSE), US Department of Education. No official endorsement implied.

Adobe LiveCycle Designer – Making Accessible PDF Forms

About

Adobe® LiveCycle Designer software enables the creation of forms that combine high-fidelity presentation with XML data handling. The easy-to-use graphical interface enables users to quickly design forms, maintain form templates, define a form's business logic, make changes, and preview forms before they are deployed as Adobe PDF or HTML documents.

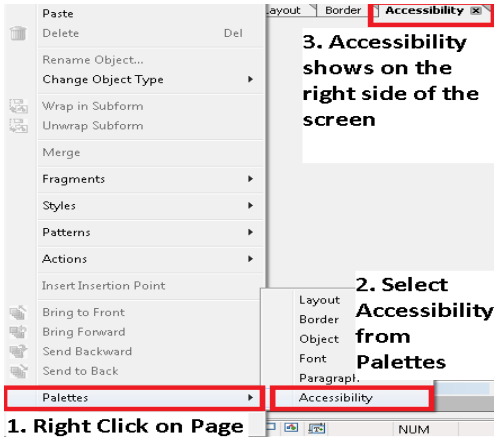
For example, this product enhances document security with secure template designs for digital signatures and enables compliance with government accessibility requirements for online forms.

Accessibility Features

- Easily configure form properties to generate accessibility information
- Create alternative text for images
- Easy addition of proper labels
- Ensures reading and tab order for logical and correct order
- Allows heading cells for tables

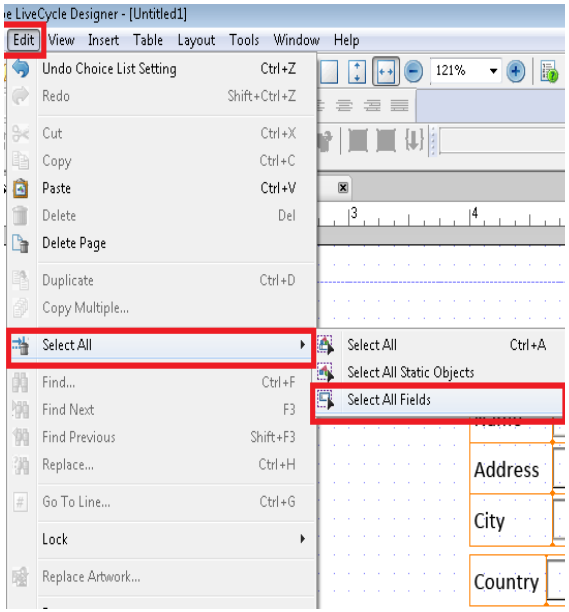
Adding Accessibility

Right click anywhere on a new document and select the Accessibility palette, which will be added on the right side of the page.

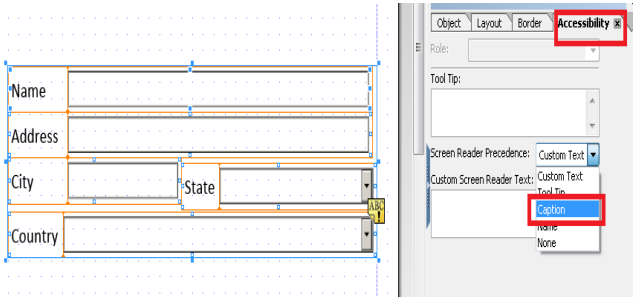


Add Proper Labels to Forms

After all form fields have been added: Go to *Edit > Select All>Select all Fields*

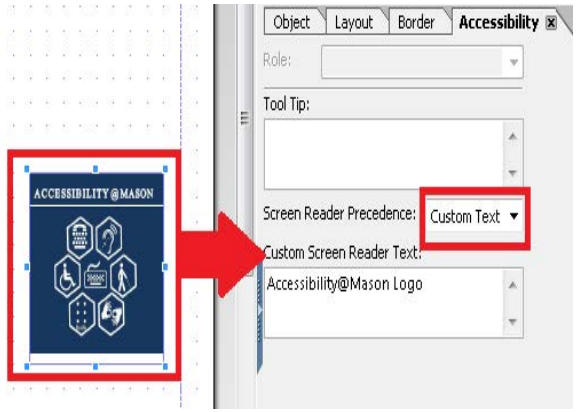


In the Accessibility Palette to the right select "Caption" – this automatically sets all form fields to the captioned name, which is to the left of the field.



Add Alternative Text for Images

After adding an image, go to the Accessibility Palette. Using Custom Text as the Screen Reader Precedence, add alternative text for the image below in the Custom Screen Reader Text.



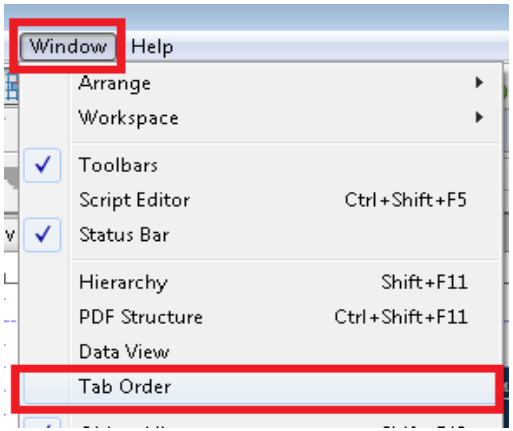
Contact us at ati@gmu.edu *or 703-993-4329*
2-24-2014

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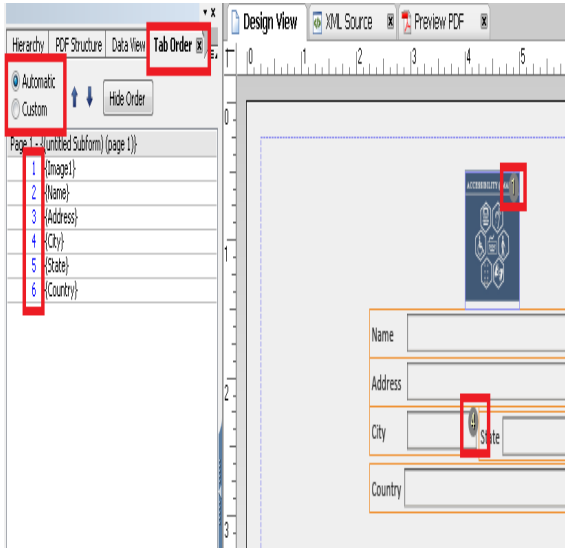
Adobe LiveCycle Designer – Making Accessible PDF Forms

Ensure Reading and Tab Order

Go to Window > Tab Order



The Tab Order window will open on the left side of the screen. Notice it sets to "Automatic" to guess the appropriate reading order. As a user, determine if this is correct. If not, select "Custom" and move the fields to the appropriate location using the up and down arrows on the Tab Order section.



Additional Resources

For more information on how to use LiveCycle Designer:

http://wwwimages.adobe.com/www.adobe.com/content/dam/Adobe/en/accessibility/products/livecycle/pdfs/livecycle-designer-accessibility-guidelines.pdf

Note: Adobe LiveCycle Designer is *free* if purchased or upgraded from Adobe Professional 8-X. LiveCycle Designer is available for purchase.

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CommonLook Office – Accessible Office to PDF Plugin

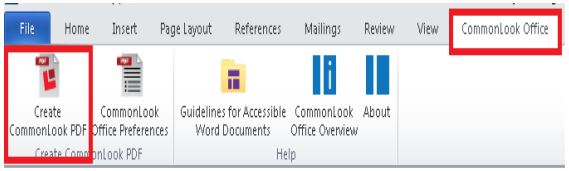
About

CommonLook Office is an add-in to Microsoft® Word and PowerPoint. This allows authors to test and correct accessibility issues through a series of checkpoints in the process of making accessible PDF documents.

This software is simple and effective. It does not require prior knowledge of accessibility.

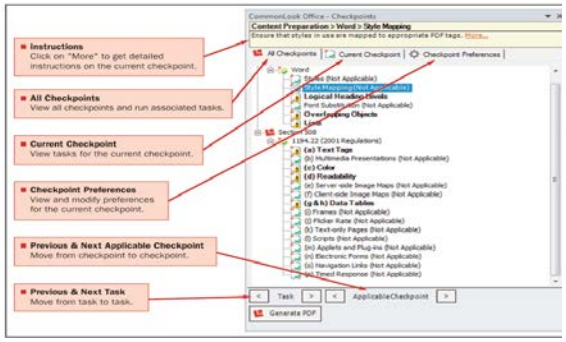
Add Accessibility

- PowerPoint > select Create CommonLook PDF
- Word > Save As CommonLook PDF

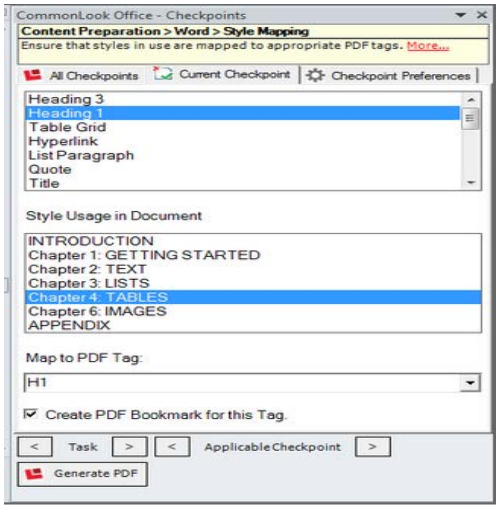


After launch the CommonLook Office panel will be displayed.

CommonLook Office displays the first applicable checkpoint based on the contents of your document.



Follow the instructions to complete each checkpoint. Note that some of the checkpoints may require changes to the Word or PowerPoint file.



Once all the applicable checkpoints are complete, CommonLook Office will generate an accessible PDF document.

Additional Resources

For Word:
http://www.commonlook.com/user-guide-commonlook-office-word

For PowerPoint:
http://www.commonlook.com/user-guide-commonlook-office-ppt

Versus Microsoft Office Accessibility Wizard

- CommonLook Office is a one step process instead of Microsoft's three.
- CommonLook Office's checks and prompts are based on Section 508 standards.
- CommonLook Office reduces the number of iterations, therefore reducing overall development time. Microsoft's Accessibility Wizard locates errors, but the user must learn how to fix them.
- CommLook Office, for example, automatically tags the document. Whereas, the user would need to learn how to do this within Microsoft Office.

Note: Please contact ATI to receive a copy of CommonLook Office for your Department.

Contact us at *ati@gmu.edu or 703-993-4329*
2-24-2014

GEORGE MASON UNIVERSITY | Assistive Technology Initiative

Making Accessible Word Documents



Guide to Creating Accessible Electronic Materials
Contact us at *ati@gmu.edu or 703-993-4329*
2-24-2014

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CREATING ACCESSIBLE MICROSOFT WORD 2011 DOCUMENTS (MAC)

Headings

Create a uniform heading structure through use of styles in Word. This allows screen readers to navigate a document, and improves accessibility for everyone.

Adding and Editing Headings

Headings can be created using the Styles toolbar.

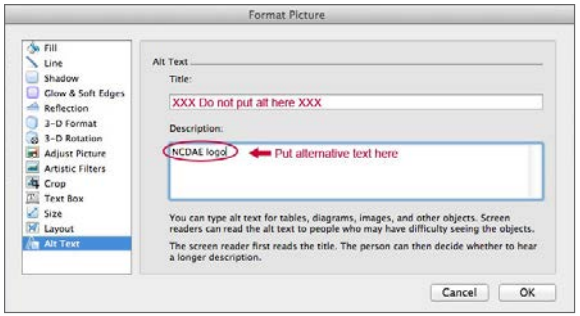
1. Select the text and ***click on the appropriate style.*** (E.g. "Heading 1")
2. Headings 1, 2, or 3 can also be assigned using ***command + option + 1, 2, or 3,*** respectively.



Alternative text for Images

Images can be given appropriate alternative text in Word. This text is read by a screen reader in a Word file and should remain intact when exporting to HTML or PDF.

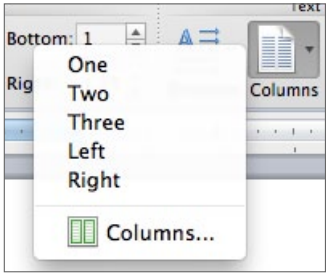
1. Right-click (or control + click) on the image and select ***Format Picture.*** A dialog box will appear.
2. Select the ***Alt Text*** option in the sidebar. Enter appropriate alternative text to the ***Description field,*** not the Title field.



If you do not see the Alt Text option, make sure you have the ***most up to date version*** of Word. Alternative text is available in Office 14.1 or newer.

Columns

When creating columns, ***always use true columns,*** not columns created by hand with the ***Tab*** key.

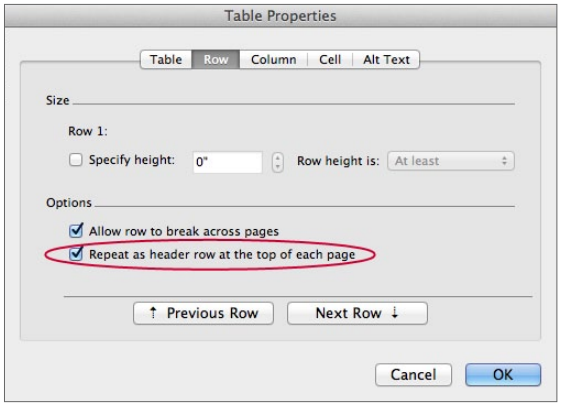


Creating Columns

1. Select ***Layout*** on the main ribbon.
2. Select ***Columns*** in the Page Setup group.

Data Tables

- Use the ***Tables*** ribbon to create tables, not by hand with spaces or the Tab key.
- There is no way to easily create table headers in Word.
- The first row can be identified as table headers in PDF (but not in HTML). To do this, Right click on the first row in the table and select ***Table Properties > Row> Repeat as header row at the top of each page.***

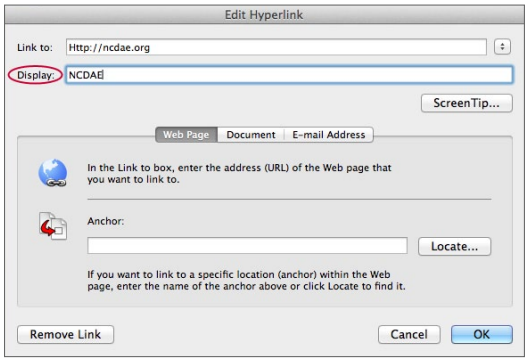


Links

Word ***automatically creates a hyperlink*** when a user pastes a full URL onto a page. These may not make sense to screen reader users, so ***more information is needed.***

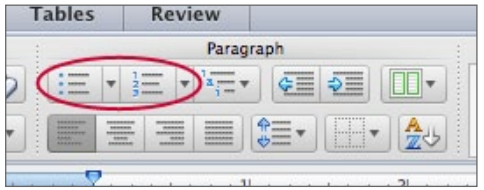
Editing Hyperlinks

1. Select a hyperlink, right click, and select ***Edit Hyperlink*** or ***command + k***.
2. Change the URL in the ***Display*** field to a more meaningful description.



Lists

Use ***true numbered*** and ***bulleted lists*** to emphasize a point or a sequence of steps. To create a list, select the ***Numbered List*** or ***Bulleted List*** option in the main ribbon.



Other Principles

- Ensure that font size is sufficient, around ***12 points.***
- Provide ***sufficient*** contrast.
- Don't use color ***as the only way*** to convey content.
- Provide a ***table of contents,*** especially for long documents.
- Use ***simple*** language.
- For a more ***widely supported file format,*** consider saving files as "Word 97-2004 Document (.doc)" format instead of the default ".docx" format.

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*For a digital version go to **ncdae.org/resources/cheatsheets***

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CREATING ACCESSIBLE MICROSOFT WORD 2007/ 2010 DOCUMENTS

GOALS

Headings

Create a uniform heading structure through use of styles in Word. This allows screen readers to navigate a document, and improves accessibility for everyone.

Adding and Editing Headings

Headings can be created using the Styles toolbar.

1. Select the text and ***click on the appropriate style.*** (E.g. "Heading 1")
2. Headings 1, 2, or 3 can also be assigned using ***CTRL + ALT + 1, 2, or 3,*** respectively.

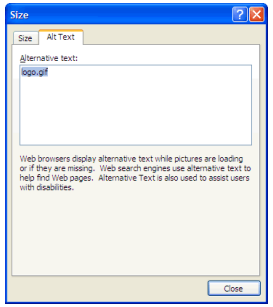


Alternative text for Images

Images can be given appropriate alternative text in Word. This alt text is read by a screen reader in a Word file and should remain intact when exporting to HTML or PDF.

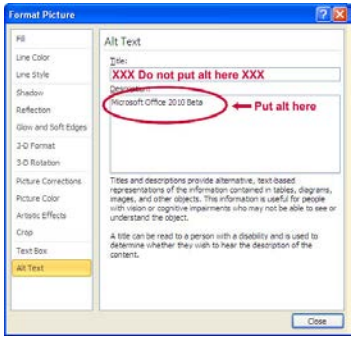
Word 2007

1. Right-click on the image and select ***Size.*** A dialog box will appear.
2. Select the ***Alt Text tab,*** and replace the filename with appropriate alternative text.



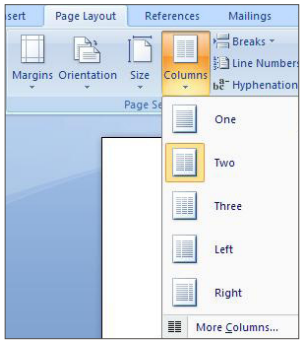
Word 2010

1. Right-click on the image and select ***Format Picture.*** A dialog box will appear.
2. Select the ***Alt Text tab*** on the sidebar. Enter appropriate alt text to the ***Description field,*** not the Title field.



Columns

When creating columns, ***always use true columns,*** not columns created by hand with the Tab key.



Creating Columns

1. Select ***Page Layout*** on the Ribbon.
2. Select ***Columns*** in the Page Setup group.

Data Tables

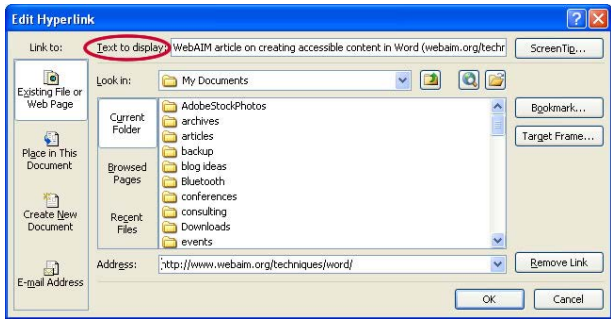
- Use the ***Insert Table command*** to create tables, not by hand with spaces or the Tab key.
- There is no way to easily create table headers in Word.
- The first row can be identified as table headers in PDF (but not in HTML). To do this, Right click on the first row in the table and select ***Table Properties > Row> Repeat as header row at the top of each page.***

Links

Word ***automatically creates a hyperlink*** when a user pastes a full URL onto a page. These may not make sense to screen reader users, so ***more information is needed.***

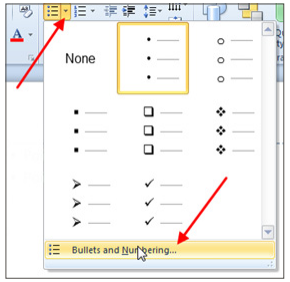
Editing Hyperlinks

1. Select a hyperlink, right click, and select ***Edit Hyperlink*** or CTRL + k.
2. Change the URL in the ***Text to Display field*** to a more meaningful description.



Lists

Use ***true numbered and bulleted lists*** to emphasize a point or a sequence of steps.



Creating Lists

1. Select ***Page Layout*** on the Ribbon.
2. Select ***Bullets and Numbering.***

Other Principles

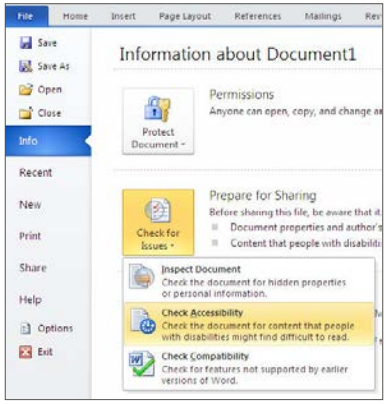
- Ensure that font size is sufficient, around ***12 points.***
- Provide ***sufficient*** contrast.
- Don't use color ***as the only way*** to convey content.
- Provide a ***table of contents,*** especially for long documents.
- Use ***simple*** language.

Word 2010 Accessibility Checker

Word 2010 includes an accessibility resource that ***identifies and repairs accessibility issues.***

Running the Accessibility Checker

1. Select ***File> Info> Check for Issues> Check Accessibility.***
2. The checker presents ***accessibility errors, warnings, and tips*** on how to repair the errors.



Docx format

The "docx" format supports ***Word 2007 and newer.*** For a more ***widely supported file format,*** consider saving files as Word 97-2003, or "doc" format.

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*For more information go to **www.ncdae.org/goals***

Made possible by a grant from the Fund for the Improvement of Postsecondary Education (FIPSE), US Department of Education. No official endorsement implied.

PDF CONVERSION IN MICROSOFT WORD 2007/2010 DOCUMENTS

Converting to PDF

To produce ***accessible PDF files*** for the web, the following requirements must be met:

1. The file must meet accessibility standards by providing ***alternative text*** for images, ***proper headings***, appropriate ***link text***, etc.
2. The file ***must be exported correctly.*** If a file is created by printing to PDF, it will not be correctly tagged.
3. Office 2007 users must have either ***Acrobat or the Microsoft PDF add-in installed.*** Office 2010 users can create tagged PDF files ***natively or with the Adobe add-in.***

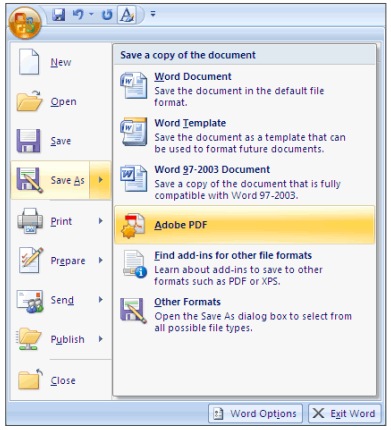
Note

The following instructions can also be used to ***convert PowerPoint files*** to PDF.

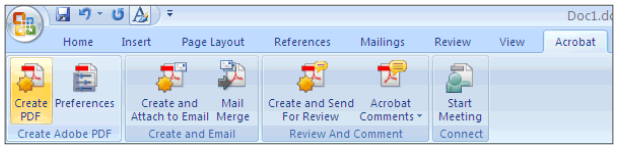
Word 2007

Adobe Add-in

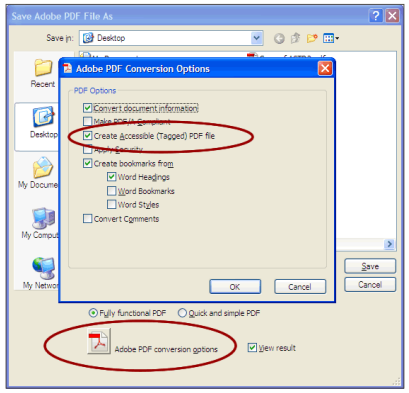
The Adobe Add-in, also called PDFMaker, is the ***best choice*** to create high-quality tagged PDF files.



1. To export a PDF, click on the Office button, hover over ***Save As,*** and select ***Adobe PDF*** (or use shortcut Alt+F, F, A).
2. Or you can select ***Create PDF*** from the Acrobat ribbon. A dialog box will appear.

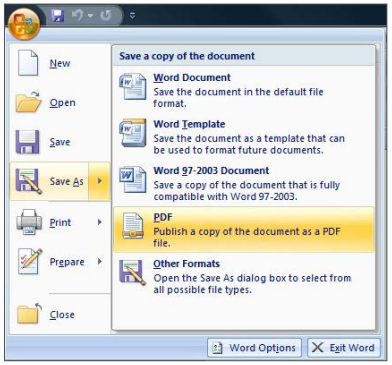


3. The program should create a tagged PDF file by default. If not, select ***Adobe PDF Conversion Options*** and select the ***Create Accessible (Tagged) PDF file*** option.

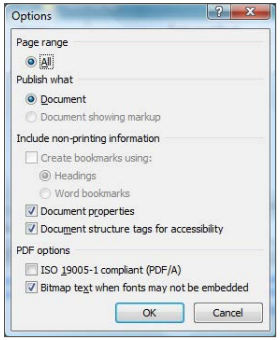


Microsoft Add-in

Word 2007 offers a free ***Save as PDF Add-in*** that allows you to create tagged PDF files without installing Acrobat. This is available at http://www.microsoft.com/en-us/download/details.aspx?id=7



1. Click on the Office Button, hover over ***Save As,*** and select ***Adobe PDF*** (or use shortcut Alt+F, F, P).
2. Before saving, select ***Options*** and ensure that the ***Document structure tags for accessibility*** option is selected.

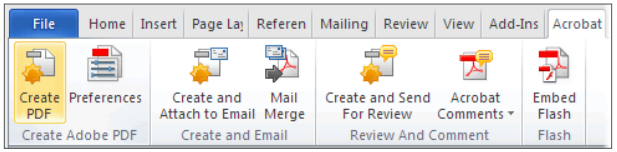


Word 2010

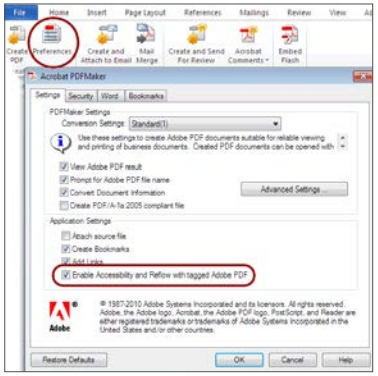
Adobe Add-in

Please note the Acrobat add-in is only available to users who have ***Acrobat X*** installed and have the ***32-bit version*** of Office 2010.

1. To export a PDF, select ***Create PDF*** from the Acrobat ribbon.



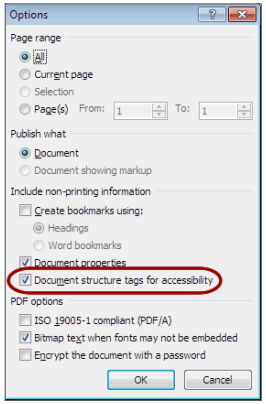
2. Or you can select File> ***Save as Adobe PDF.*** A dialog box will appear.
3. The program should create a tagged PDF file by default.
4. If not, select ***Preferences*** from the Acrobat ribbon and ensure that ***Enable Accessibility and Reflow with tagged Adobe PDF*** is selected.



Saving PDF Natively

Tagged PDF files can still be created without installing Acrobat.

1. Select File > ***Save As.***
2. Under ***Save as Type,*** select PDF.
3. Before saving, select ***Options*** and ensure that the ***Document structure tags for accessibility option*** is selected.



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Made possible by a grant from the Fund for the Improvement of Postsecondary Education (FIPSE), US Department of Education. No official endorsement implied.

MathType - Creating Accessible Math Equations

About MathType 6.9

MathType is a powerful interactive equation editor for Windows and Macintosh that lets you create mathematical notation for word processing, web pages, desktop publishing, presentations, e-learning, and for TeX, LaTeX, and MathML documents.

MathType with Microsoft Word

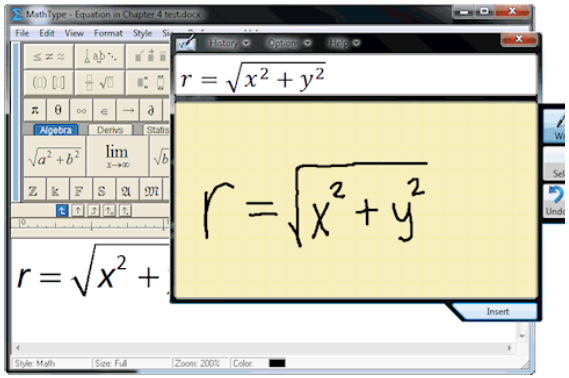
MathType provides close integration with Microsoft Word, letting you insert equations by clicking a button on the toolbar. You can also perform other tasks such as numbering equations, formatting all the equations in your document, and much more.

Within Word, you can:

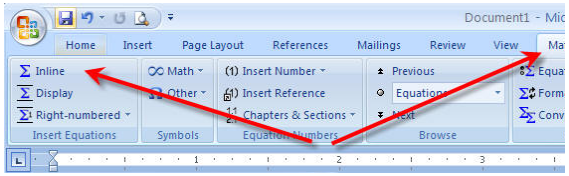
- Add an equation
- Edit an equation
- Insert handwritten math
- Number and reference equations
- Change the font and size of equations
- Create accessible math web pages
- And More…

Features

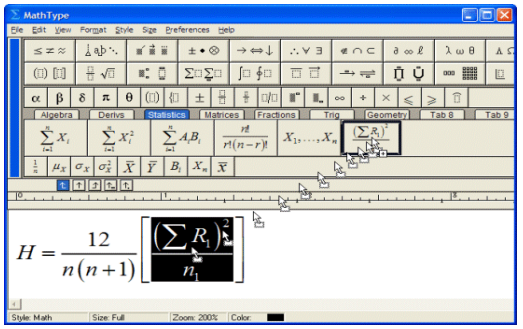
If you are using Windows 7 or Windows 8 you can use a tablet PC, your mouse, or a digitizing tablet to enter handwritten math directly into MathType.



Full ribbon support in Word 2013, 2010, 2007 and MAC Office 2011.



Save expressions in the toolbar:



For a full reference of “How to” and more info on MathType, visit:

http://www.dessci.com/en/products/mathtype/

Math Player

Math Player enables Microsoft Internet Explorer (IE 9 and older) to display mathematical notation in web pages. It also makes math accessible by enhancing Internet Explorer such that mathematical expressions can be enlarged and spoken for people with reading-related learning disabilities. Use MathType to save files in a MathPlayer format. MathPlayer is available as a free download. Find more information by visiting:

http://www.dessci.com/en/products/mathplayer/

Contact us at *ati@gmu.edu or 703-993-4329*
2-24-2014

GEORGE MASON UNIVERSITY | Assistive Technology Initiative

Making Accessible PowerPoint Documents



GEORGE MASON UNIVERSITY | Assistive Technology Initiative

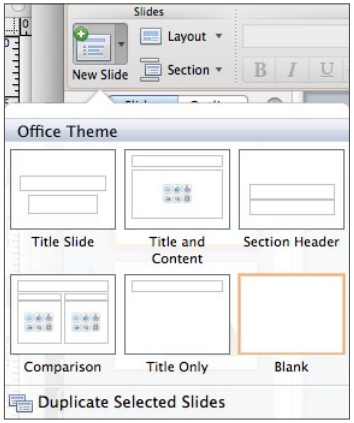
CREATING ACCESSIBLE MICROSOFT POWERPOINT 2011 PRESENTATIONS (MAC)

Slide Layouts

Using slide layouts provided within PowerPoint will ensure that files have ***correctly structured headings and lists, and proper reading order.***

Creating Slide Layouts

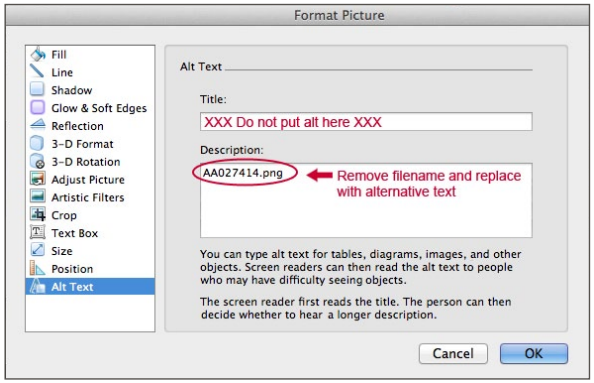
1. Select ***Home> New Slide,*** or select the New Slide button from the default tool bar.
2. Choose from the ***slide options*** menu the desired layout.



Alternative text for Images

Images can be given appropriate alternative text in PowerPoint. This text is read by a screen reader in a PowerPoint file and should remain intact when exporting to HTML or PDF.

1. Right-click (or control + click) on the image and select ***Format Picture.*** A dialog box will appear.
2. Select the ***Alt Text*** option in the sidebar.
3. Remove the image filename from the ***Description*** field. This is a bug in PowerPoint for Mac.
4. Enter appropriate alternative text to the ***Description*** field, ***not*** the Title field.



Data Tables

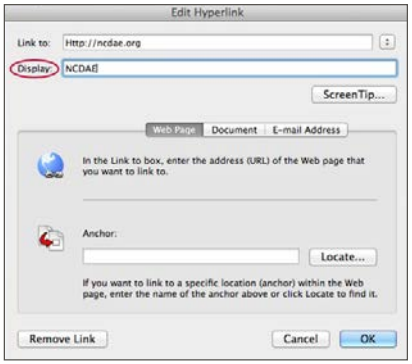
- PowerPoint can style rows and columns so they appear as data tables, but ***there is no way to add content in a way that will be identified by a screen reader.***
- If your presentation contains more than the simplest tables, and if you have Adobe Acrobat, ***consider creating an accessible PDF*** and adding the additional accessibility information in Acrobat Pro.

Links

PowerPoint ***automatically creates a hyperlink*** when a user pastes a full URL onto a page. These may not make sense to screen reader users, so ***more information is needed.***

Editing Hyperlinks

1. Select a hyperlink, right click, and select ***Hyperlink> Edit Hyperlink*** or command + k.
2. Change the URL in the ***Display*** field to a more meaningful description.



Outline and Notes Panels

PowerPoint contains two panels that can be used to enhance accessibility: the ***outline panel*** and the ***notes panel.***

Outline Panel

- The ***outline panel*** contains a ***text outline*** of the content that appears in your slides.
- Reviewing this panel can help ensure the content on the slides is ***logically sequenced,*** that slide titles are ***unique and meaningful,*** and that reading order is ***appropriate*** for any user.

Notes Panel

- The ***notes panel*** allows the speaker to add notes and information that will ***not appear on the slides.***
- Placing image or chart descriptions in this area should be avoided. This information ***may not be accessed*** by a screen reader, so use with caution.

Other Principles

- Ensure that ***font size is sufficient.*** If your presentation will be viewed on a projector, font size may need to be even larger.
- Provide ***sufficient contrast.*** If your presentation will be viewed on a projector, sometimes the contrast needs to be even more pronounced.
- Do not use color ***as the only way*** to convey content.
- Avoid ***automatic slide transitions.***
- Use ***simple slide transitions*** when possible.
- Use ***simple*** language.
- Check ***reading order of text boxes*** that are not part of the native slide layout. They are usually the last thing read by a screen reader.
- If you have embedded video, ensure that the ***video is captioned,*** and that the player controls are accessible.
- If you have embedded audio, ***include a transcript.***
- If your slides contain animations, ensure that they are ***brief and do not distract*** from the most important content on the page.
- For a more ***widely supported file format,*** consider saving files as "PowerPoint 97-2004 Presentation (.ppt)" format instead of the default ".pptx" format.

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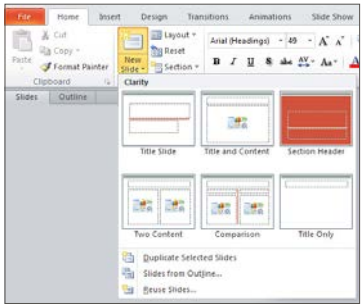
CREATING ACCESSIBLE MICROSOFT POWERPOINT 2007/ 2010 PRESENTATIONS

GOALS

Slide Layouts

Using slide layouts provided within Powerpoint will ensure that files have ***correctly structured headings and lists, and proper reading order.***

Creating Slide Layouts

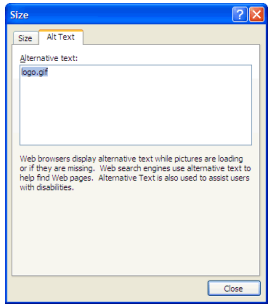


1. Select ***Home> New Slide,*** or select the New Slide button from the default tool bar.
2. Choose from the ***slide options*** menu the desired layout.

Alternative text for Images

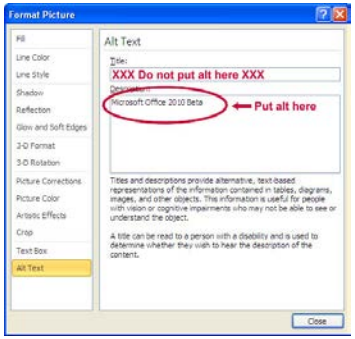
Images can be given appropriate alternative text in PowerPoint. This alt text is read by a screen reader in a PowerPoint file and should remain intact when exporting to HTML or PDF.

PowerPoint 2007



1. Right-click on the image and select ***Size and Position.*** A dialog box will appear.
2. Select the ***Alt Text tab,*** and replace the filename with appropriate alternative text.

PowerPoint 2010



1. Right-click on the image and select ***Format Picture.*** A dialog box will appear.
2. Select the ***Alt Text tab*** on the sidebar. Enter appropriate alt text to the Description field, not the Title field.

Data Tables

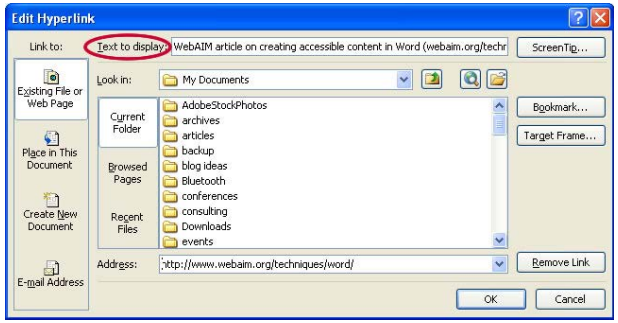
- PowerPoint can style rows and columns so they appear as data tables, but ***there is no way to add content in a way that will be identified by a screen reader.***
- If your presentation contains more than the simplest tables, and if you have Adobe Acrobat, ***consider saving your presentation to PDF*** and adding the additional accessibility information in Acrobat Pro.

Links

PowerPoint ***automatically creates a hyperlink*** when a user pastes a full URL onto a page. These may not make sense to screen reader users, so ***more information is needed.***

Editing Hyperlinks

1. Select a hyperlink, right click, and select ***Edit Hyperlink*** or CTRL + k.
2. Change the URL in the ***Text to Display field*** to a more meaningful description.



Outline and Notes Panels

PowerPoint contains two panels that can be used to enhance accessibility: the ***outline panel*** and the ***notes panel.***

Outline Panel

- The ***outline panel*** contains a ***text outline*** of the content that appears in your slides.
- Reviewing this panel can help ensure the content on the slides is ***logically sequenced,*** that slide titles are ***unique and meaningful,*** and that reading order is ***appropriate*** for any user.

Notes Panel

- The ***notes panel*** allows the speaker to add notes and information that will ***not appear on the slides.***
- Placing image or chart descriptions in this area should be avoided. This information ***may not be accessed*** by a screen reader, so use with caution.

Other Principles

- Ensure that ***font size is sufficient.*** If your presentation will be viewed on a projector, font size may need to be even larger.
- Provide ***sufficient contrast.*** If your presentation will be viewed on a projector, sometimes the contrast needs to be even more pronounced.
- Do not use color ***as the only way*** to convey content.
- Avoid ***automatic slide transitions.***
- Use ***simple slide transitions*** when possible.
- Use ***simple*** language.
- Check ***reading order of text boxes*** that are not part of the native slide layout. They are usually the last thing read by a screen reader.
- If you have embedded video, ensure that the ***video is captioned,*** and that the player controls are accessible.
- If you have embedded audio, ***include a transcript.***
- If your slides contain animations, ensure that they are ***brief and do not distract*** from the most important content on the page.

PowerPoint 2010 Accessibility Checker

PowerPoint 2010 includes an accessibility resource that ***identifies and repairs accessibility issues.***

Running the Accessibility Checker

1. Select ***File> Info> Check for Issues> Check Accessibility.***
2. The checker presents ***accessibility errors, warnings, and tips*** on how to repair the errors.

Pptx format

The "pptx" format supports ***PowerPoint 2007 and newer.*** For a more ***widely supported file format,*** consider saving files as PowerPoint 97-2003, or "ppt" format.

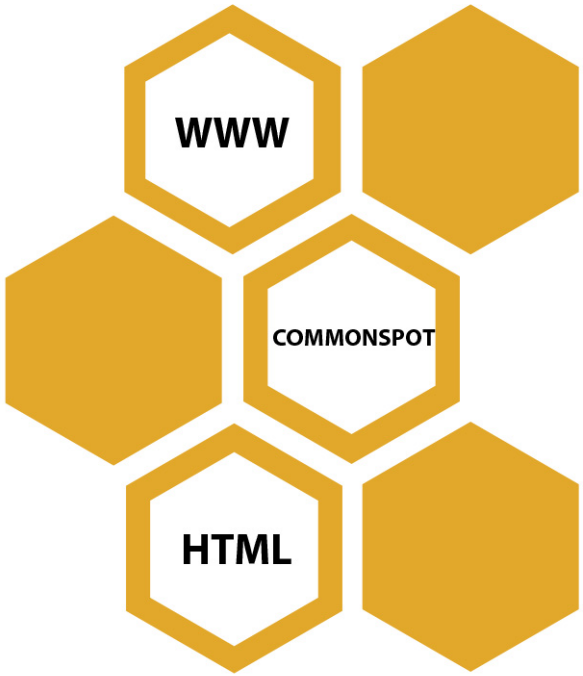
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Web Accessibility



In this section, information is provided on **identifying**, **testing**, and **creating** accessible websites. Many accessibility problems can be quickly and easily identified without the need for a technical background. These handouts outline free accessibility tools and simple techniques to help you identify common web accessibility problems.

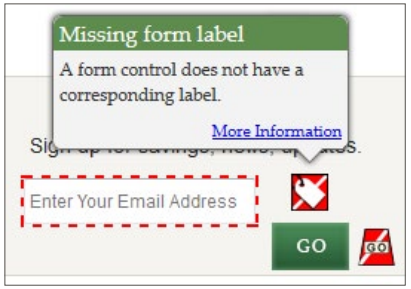
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IDENTIFYING WEB ACCESSIBILITY ISSUES

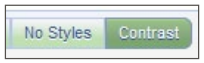
While it takes a ***fairly technical background*** to detect all accessibility issues and features, there are many accessibility problems that can be ***quickly and easily*** identified without the need for a highly technical background. This handout will suggest a few free accessibility tools and offer ***4 simple techniques*** to help you identify some common web accessibility problems.

1. Use the WAVE tool to detect errors

WAVE ***(wave.webaim.org)*** is a ***free online tool*** that can help you evaluate your page for accessibility. WAVE places ***color-coded icons*** over the page you are testing. While it takes some skill to interpret some icons, you can be sure that any ***red icon*** is an ***accessibility error*** to be addressed.



- If you are not sure what an icon means, click on it and then select ***"More information".***
- If you cannot see the icons correctly, select the ***No Styles button*** to view the page without styles. Although the page will look different, all icons should be visible.



- You can also click on the ***Contrast button*** to identify text that may be difficult for some people to read.

2. Navigate without a mouse

Some users with ***motor disabilities***, as well as those who are ***blind***, have difficulty navigating the web ***using a mouse***. Because of this, all web content must be accessible ***using the keyboard only***. To test this, use the ***Tab key*** to navigate through links and forms ***(Shift + Tab to go backward)*** and the ***Enter key*** to perform an action. If you can't get to what you want, or if your cursor gets trapped and can't move, the page has an accessibility problem.

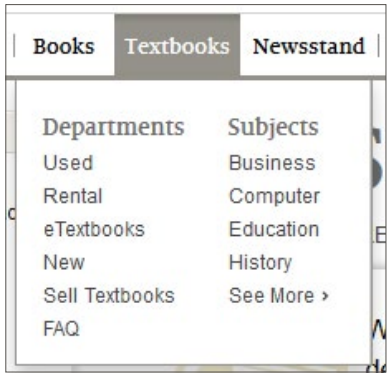
Note: If you are using Safari, you will need to enable the following preference first: ***Safari*** > ***Preferences*** > ***Advanced*** > Check ***"Press Tab to highlight each item on a webpage"***.

Check for the following issues:

- When you ***'Tab'*** to a link with the keyboard ***it should be highlighted,*** usually with a dashed outline. If you don't see this outline this is a ***serious*** issue.



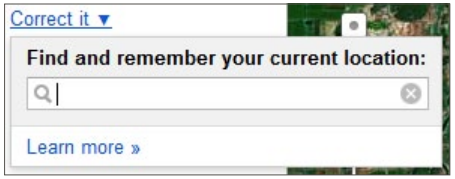
- Ensure that the ***keyboard navigation order is logical.*** It should basically match the visual reading order of the page. (e.g., header, sidebar, main content, footer).
- Check for things that ***only work with a mouse*** (e.g., a navigation menu that expands when the user hovers over it with a mouse). See what happens if you try to navigate this same area with a keyboard.



- Some pages have a link at the ***beginning of the page*** that allows users to ***skip over top navigation*** to the ***main content*** on the page, navigate to this link with ***Tab*** and then press ***Enter*** to activate the link. Ensure that the screen visually 'jumps' over the navigation to the beginning of the page. Hit ***Tab*** again and make sure that focus goes to the next link on the page. If it jumps back to the top of the page, or if focus never moves from the top of the page in the first place, the skip link ***might be broken.***



- If any boxes ***pop open*** (e.g., slideshows, date pickers, warnings) make sure you can navigate and close these boxes with a keyboard. The ***Esc*** key should close these boxes as well.



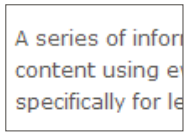
3. Zoom a page and enlarge text

Some users with visual disabilities ***enlarge page content*** for readability, but enlarging content on a page can sometimes cause layout problems. To make content larger, press ***Ctrl*** (***Cmd*** on Mac) and + (plus). ***Ctrl*** and – (minus) makes content smaller and ***Ctrl*** and the number ***0*** will return to the default. ***Zoom*** the page several times and make sure everything is ***readable***, especially images with text. It is fine if a horizontal scroll bar appears at the bottom of your window.

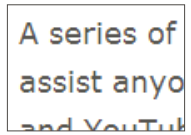
By default, zooming enlarges everything on the page, ***including images,*** but some users only enlarge text, so test this as well. To enlarge ***only text,*** do one of the following:

- Safari: ***View*** > ***Zoom Text Only***
- Firefox: ***View*** > ***Zoom*** > ***Zoom Text Only***
- Internet Explorer: ***View*** > ***Text size***

Then, ***enlarge the page*** at least 150%, and up to 200% (roughly 4-5 steps) and make sure none of the text becomes ***hidden*** or ***unreadable.*** It is fine if text wraps to a new line or if the page doesn't look the same.



100%



150%



200%

4. Other Recommendations to help you detect accessibility issues

- Check videos for ***captions.***
- Look for links with ***generic link text*** such as "click here" or "more info." These types of links can be confusing to blind screen reader users, and should be ***replaced*** with ***more descriptive link text.***
- Check the ***page title*** (the text that appears in your browser tab) and make sure that it is ***unique*** and ***descriptive.***



- Contact ***individuals with disabilities*** and see if they would be willing to ***review*** the site and ***identify*** issues they encounter.

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How to Test Websites for Accessibility – Free Testing Tools

WAVE

WAVE, by WebAim, is a tool that provides quick feedback on the current state of a webpage. It displays results with green, yellow and red tags to show where violations may occur and where accessibility is already built in.

To test an Internet resource for accessibility, enter the URL into the space provided at the WebAim Wave port at http://wave.webaim.org/



The results will display on the left side of the page with a summary of issues. Errors are in red, yellow alerts need a human to test, and green checks are where accessibility is included.



WAVE Firefox Extension

WAVE also provides a toolbar extension for Firefox where you can run WAVE directly in Firefox.

Visit WAVE Firefox Extension for more information.

Accessibility Management Platform

The Accessibility Management Platform (AMP) is a web-based system with the capability to spider through an entire website and test for 508/Mobile/WCAG standards and highlight violations.

It provides accessible code examples and best practices for how to correct violations. A clean, easy to read report is then published.

Have a website tested for free at GMU using this tool. Please visit Request a Web Accessibility Evaluation.

Sample from AMP report below:



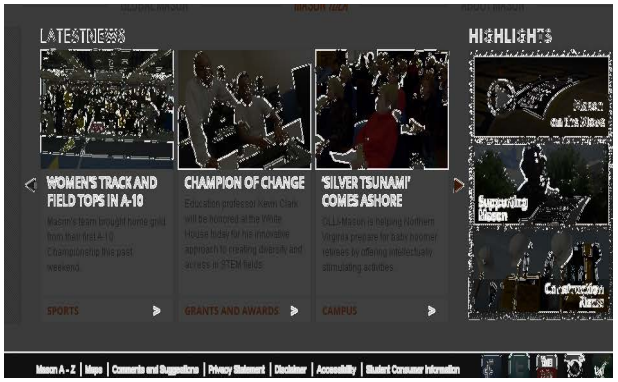
Color Contrast Analyzer

The Color Contrast Analyzer is a Google Chrome Extension. This extension allows a user to analyze color contrast on a single webpage according to the WCAG 2.0 color standards. A user can choose to analyze a portion of the webpage, or the entire page.

The automated process takes anywhere from 1-3 minutes and the results display a map of the outlined text that meets the standards.

Any text that is not displayed in the results does not have enough contrast to meet the standards selected.

Sample of results below:



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2-24-2014

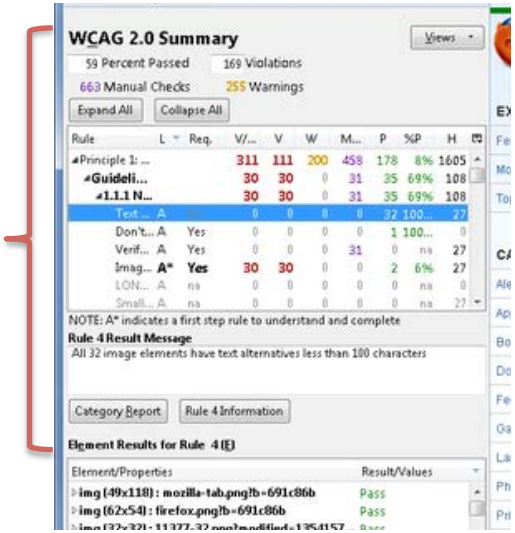
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How to Test Websites for Accessibility – Free Testing Tools

Open AJAX Alliance

The Open AJAX Alliance (OAA) is an accessibility add-on within Firefox. This plug in opens a sidebar to evaluate web pages for compliance to WCAG 2.0 success criteria and allows web developers to explore and inspect the accessibility of webpages.

OAA displays a summary report with the number of violations, warnings, manual checks, and the percentage of accessibility included.



The sidebar supports both ARIA code and the reports can easily be sent to developers and managers to inform them of accessibility problems or demonstration of conformance.

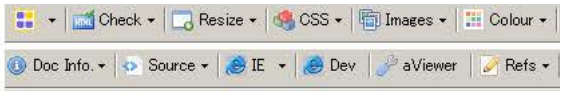
Web Accessibility Toolbar in IE

The Web Accessibility Toolbar (WAT) is a free download provided by the Paciello Group.

This toolbar is built into Internet Explorer (IE) and provides quick and easy manual checks for web accessibility.

With the WAT Toolbar, a user can check for headings, alt text for images, color contrast and more.

Sample below:



Additional Resources

WebAim (Web Accessibility in Mind)

AMP (Accessibility Management Platform) by SSB Bart Group

WebAccessibility.com

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How to Test Websites for Accessibility – Page Title

Page Titles

Good page titles are particularly important for orientation. They help individuals move between pages that are open in their browser.

Page titles can be:

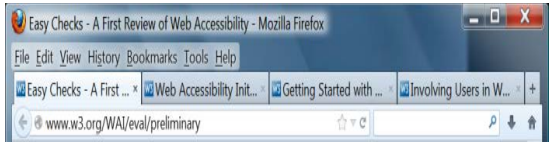
- Shown in the window title bar in some browsers
- Shown in browsers' tabs when there are multiple web pages open
- Shown in search engine results
- Used for browser bookmarks/favorites
- Read by screen readers
- In the web page markup is the <title> within the <head>

What to Check

- Check that there is a title that adequately and briefly describes the content of the page and distinguishes the page from other web pages.

The example below shows the page title "Easy Checks - A First Review of Web Accessibility" in the title bar, and the titles of 4 pages in the tabs.

Note that in the tabs, only the first part of the page title is shown.



Check Page Title with IE WAT (Beginner)

Some versions of Internet Explorer (IE) have the title bar. If so, the following steps are **not** needed.

- Open the web page
- On toolbar, select "Structure"
- Select "Heading structure"
  - Or, with keyboard: **Ctrl+Alt+6**, then down arrow key to "Heading structure"
- A new page opens
- Page title is shown after "Title"

Additional Resources

While there is flexibility on what makes a good page title, a best practice is for titles to be "front-loaded" with the important and unique identifying information first.

Poor Titles:

- Welcome to home page of Acme Web Solutions, Inc.
- Acme Web Solutions, Inc. | About Us
- Acme Web Solutions, Inc. | Contact Us
- Acme Web Solutions, Inc. | History

Better Page Titles:

- Acme Web Solutions home page
- About Acme Web Solutions
- Contact Acme Web Solutions
- History of Acme Web Solutions

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How to Test Websites for Accessibility – Accessible Links

What to Check

Links, and/or their associated ***title attributes***, must be labeled correctly.

- A “Skip to Content” or “Skip Navigation” link should be located on a webpage in the upper right or left hand side of the screen. This link will allow keyboard and screen reader users to quickly access the main content of the page without navigating through all the main menus and navigation bars.
- ‘Click here’, ‘More Info’, etc.
- URLS that are spelled out, such as **http://section508.gov/docs/examples/files/PPT/slide1.html** instead of linking to text

Check with IE WAT (Beginner)

Some versions of Internet Explorer (IE) have the title bar. If so, the following steps are **not** needed.

- Open the web page
- On toolbar, select "Doc Info"
- Select "List Links"
  - A new window will open with a report
- Review links provided in report
  - For example: Link phrases and words rather than write out URLs such as **www.cnn.com/news/story_PandaCam** should be **Panda Cam Story** title linked
- Also, within the report:
  - Check the first few links under link content for a “Skip to Content” or “Skip Navigation” link
  - Use CTRL + F to open a “Find” toolbar at the top of the page and type the work “skip” then press enter
  - If “Skip” exists on that page, the word will be highlighted
  - If that option does not bring up results, then there is no skip to content link present

Check Using Keyboard and/or Screen Reader (Intermediate)

Screen readers such as NVDA or JAWS can be used to access a list of links on a page.

- Ensure the skip link is functioning correctly by: Tab to link > Enter > Tab again
- Watch for redundant title attributes <a…title="Articles">Articles
- **INSERT + F7** opens a dialog box where a list of all of the links on the page will appear
- Press the **“S” key** to search for all links that start with the letter “S”
  - For example ‘Skip Navigation’, ‘Skip to Main’, ‘Skip to Content’, etc.

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How to Test Websites for Accessibility – Headings

Headings

Web pages often have sections of information separated by visual headings. For example, heading text is bigger and bold. Headings need to be "marked up" in the web page "code" (e.g., HTML).

A “Heading” for a web page can be:

- The title of the page, or
- Titles of sections of the page

Ensure that all logical headings use the HTML heading tags. In order for a screen reader to quickly access content, numbering headings is important.

Heading levels should have a meaningful hierarchy, such as:

Heading Level 1 <h1>
Heading Level 2 <h2>
Heading Level 3 <h3>
Heading Level 3 <h3>
Heading Level 2 <h2>
Heading Level 3 <h3>
Heading Level 4 <h4>
Heading Level 4 <h4>
Heading Level 2 <h2>

What to Check

- The page has a heading
- All pages should have at least one heading
- All text that looks like a heading is marked up as a heading
- All text that is marked up as a heading is really a conceptual section heading
- The heading hierarchy is meaningful. Ideally the page starts with an "h1"

Check with IE WAT (Beginner)

Using the WAT Toolbar in Internet Explorer (IE):

- Go to Structure and select Heading Structure
- Ensure that the heading structure list is in order (<h1>, <h2>) and that the subheadings are labeled

Check Using Keyboard and/or Screen Reader (Intermediate)

Use a screen reader such as NVDA or JAWS to access a list of headings.

- For **JAWS**, press **Insert+ F6** to open a list of headings. Arrow down through the list to ensure that the headings are in the correct order and that the list does not skip subheadings

- For **NVDA**, press **Insert + F7** and select the Headings radio button at the top. This will bring up a list of headings on the page. Ensure that the headings are labeled and that the list does not skip subheadings

Additional Resources

- Info and Relationships
- Headings and Labels
- Section Headings

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How to Test Websites for Accessibility – Image Description (Alt Text)

Alt Text

Alt text should be functional and provide an equivalent user experience.

Text alternatives ("**alt text**") convey the purpose of an image, including pictures, illustrations, charts, etc. For example, individuals with visual impairments and use screen readers are able to hear the alt text read aloud.

- Appropriate text alternative for a search button (🔍) would be "search", not "magnifying glass"
- The '**alt**' attribute is an attribute of the '**img'** tag and is meant to be an alternative for non-visual browsers when they come across images. This ensures that a text equivalent is available when the image is not visible on the page. **For example**,



<img src="graphics/logo.gif" alt="George Mason University" / >

- If an image is not of importance and is used solely for visual needs, an alt text with open and closed quotes ("") should be used. Empty '**alt**' tags hide an image from a screen-reading application, so background images and aesthetic elements would be good uses for this. **For example,**



<image src="graphics/progress.gif" alt="" / >

- Background images cannot have an '**alt**' text
    - Only images without informational content are allowed to be background images, or the information needs to be provided in an alternative way

Check with IE WAT (Beginner)

- Use the WAT in Internet Explorer (IE)
- Go to **Images**
- Select **Show Images** to outline images
- Show alt text on the page
    - If an error message appears, select **OK** or **press enter** to close the message
- Notice which images have No Alt attached to them

Check Using Keyboard and/or Screen Reader (Intermediate)

With JAWS, check Alt text for images or "Graphics" on a page:

- Press the JAWS quick navigation key for graphics **(G)** on a web page
- Listen to how JAWS reads the graphics
- If it reads a short, but descriptive title, then the image is labeled correctly.
    - If it reads a long, drawn out label, or the name of the file image that does not represent the image, it is not labeled correctly
- With JAWS, press **Insert + F3** to open the HTML elements dialog box
    - **Arrow down** to the graphics list and press enter
    - A separate list of all graphics will open
    - Check the list for the graphic labels

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How to Test Websites for Accessibility – Accessible Tables

Tables

There are two types of tables:

- Presentation
- Data

If Tables are being used to display anything other than simply presentation, ensure that table headings are marked as headings.

Check with IE WAT (Beginner)

- Use the WAT in Internet Explorer (IE)
- Go to **Table**
- Select **Table Headers**
- Any Headers will be highlighted
- If you see a table that does not show a highlight then it is not set as a header

While viewing the table on the website:

- Use the WAT toolbar in IE
- Go to **Table Show Data Tables** from the toolbar
- Look for the **table header <th> tag** at the Header level of the table

Check Using Keyboard and/or Screen Reader (Intermediate)

Use JAWS to find tables on a web page

- Press the quick navigation key for tables **(T)**
- JAWS will cycle through the tables on the page and read any presentation or data tables
- If you come across a data table, arrow down through the table to a cell that contains data
- Press **ALT + CTRL + Numpad 5** to check the heading order of the table
- If the table headings are properly labeled, JAWS will read the Column heading, Row heading and the contents of the cell
- If JAWS only reads the contents of the cell, then the table headings are not properly labeled
- Table Headers should read in the order in which a table presents information

For example:

Class Schedule

Class Name	Course #	Location
Biology	Bio 100	Building A
Chemistry	Chem 100	Building B

Example Code:

```
<table>
<caption>Class Schedule</caption>
<tr>
<th scope="col">Class Name</th>
<th scope="col">Course #</th>
<th scope="col">Location</th>
</tr>
<tr>
<th scope="row">Biology</th>
<td>Bio 100</td>
<td>Building A</td>
</tr>
<tr>.....
```


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How to Test Websites for Accessibility – Form Fields, Error Messages, and Direct Focus

Form Fields

There are 2 things to check:

- Ensure the tab focus goes directly to each form field in the correct reading order of top to bottom, left to right
- Ensure form fields are labeled properly in the code.
    - The code label should be same as the form name
    - If the field label is First Name, then the code label should also be First Name

Error Messages on Form Pages

The user must be able to quickly identify any form fields that are not filled out correctly.

For example, if an email address is required but was not filled out on a form, the form is submitted and an error message occurs. The user needs to be able to quickly identify which fields are not filled out correctly. The error listing must receive focus directly after the user attempts to submit information to advance to the next screen.

Direct Focus Dialog Box

When a new dialog box (pop-up box or window) is displayed, does the focus move to this dialog box? For example, if there is an error message from filling out a form and a separate dialog box is displayed with an error message, does this box take focus over the webpage or application?

Check with IE WAT (Beginner)

FORM FIELDS

- Use the WAT in Internet Explorer (IE)
- Select **Structure**
- Go to **Fieldset/Labels**
- A dialog box will come up giving you the number of errors out of the number of form controls on the page
- Any errors on the page will signify an invalid or missing label.

ERROR MESSAGES ON FORM PAGES

The error message can be tested by selecting the **button** without filling in any of the form fields. A dialog box will take to notify you of the errors. Does it tell you what the error is? Does it take you back to the specific area in which you need to make the change?

- Each individual error listing must begin with the text “Error” to best convey information to assistive technologies.
- The user must be able to navigate directly to fields in order to make corrections. Press the tab key to see if the focus can be navigated to the form field in error.

DIRECT FOCUS DIALOG BOX

- Select the **button** and notice the dialog box that appears
- Does it take focus?
- Can you press the tab key to access the **OK button**?
- Press **Ctrl + P** to see if the print dialog box appears to just print that specific dialog box

Check Using Keyboard and/or Screen Reader (Intermediate)

FORM FIELDS

- Use JAWS to find form fields (edit fields)
- Check the labeling of the edit fields by pressing **Insert + F3** to open the HTML features list

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How to Test Websites for Accessibility – Form Fields, Error Messages, and Direct Focus

- Arrow down to Edit Boxes List and press enter
- This will open a list of all of the edit box labels on the page
- Arrow down through the list to ensure that the labels correspond with the edit field

ERROR MESSAGES ON FORM PAGES

- Use JAWS to navigate to the **button** by pressing the quick navigation key **"B"** for button
- When JAWS reads the button name, **press enter**
- The error dialog box will appear
- Press enter or escape to close the dialog box

DIRECT FOCUS DIALOG BOX

- Use JAWS to access the **button**
- Press **enter** on the button
- Does JAWS read the dialog box that appears?
- Can you tab to the **OK button**?

Additional Resources

FORMS

Click on the text next to a form field. If the field receives focus, the label is correctly-associated. This makes fields easier to click, especially checkboxes and radio buttons.

- Buttons should not have labels
- 1:1 form to label relationship
- Fieldsets
- Other ways to group large lists: tabindex="0" or ARIA
- Support for ARIA labeling (i.e., aria-labeled by, aria-described by) is good, but testing still required
  - Start with HTML labeling and user ARIA if necessary

ERROR MESSAGES

- Submit the form empty and look for error messages. Are they accessible?
  - Errors at the top
  - Alerts receive focus
  - Errors are inline
- Submit forms empty
- Direct users directly to errors
- Provide quick access to the problematic elements
- Allow resubmission of the form

DIALOG BOXES

- Focus should be set to the dialog box when it opens
- Focus should be set back to the correct place in the page when it closes
- JavaScript alerts, etc., are not the same as dialog boxes. They should be natively accessible.
- Some non-modal dialogs (e.g., some date pickers) may be hidden from keyboard users if functionality is available with the keyboard.
- Most non-modal dialogs should return focus, but some should set focus to the next link/form control.
- Many jQuery dialogs have good accessibility.

Contact us at ati@gmu.edu *or 703-993-4329*
2-24-2014

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How to Test Websites for Accessibility – CAPTCHA and Timed Responses

CAPTCHA

CAPTCHA stands for ***C****ompletely* ***A****utomated* ***P****ublic* ***T****uring test to tell* ***C****omputers and* ***H****umans* ***A****part*

Check CAPTCHA

- CAPTCHA image cannot include ALT text for screen readers, because a bot would read it
- Audio CAPTCHAs can interfere with screen readers unless a pause at the beginning is included
- As spammers develop algorithms to break CAPTCHA systems, images and audio become more distorted, to the point where even many sighted users have difficulties identifying the text



Sometimes CAPTCHA will state it is accessible due to offering an "audio" option - this is not the case.

Additional Information

Although there are workarounds available, the best approach may be to use a CAPTCHA that poses a logic question in plain text. Such questions are easy for humans to answer, but difficult for a machine to parse.



Timed Responses

When using redirects or forms requiring a timed response, it is important to make sure adequate response time is given for mobility impaired users, users with screen readers and readers with cognitive impairments. All of these audiences require extra time to process instructions. Think online banking and purchasing online tickets, etc.

Check Timed Responses

- If elements on the page require a timed response, for example:
  - Quizzes or automatically refreshing pages or
  - Any timed redirects
- Warn the user before the time limit expires
- Provide the user sufficient time to indicate that more time is required before the time limit is reached
- Page is not accessible if:
  - User has no option to extend the time
  - Is not given an alert with enough time to extend the limit

Additional Resources

http://textcaptcha.com/

Contact us at ati@gmu.edu *or 703-993-4329*
2-24-2014

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How to Test Websites for Accessibility – Color Contrast

Color Contrast

Some individuals cannot read text if there is not sufficient contrast between the text and background.

Gray Text on Light Background

Some people cannot read text if there is not sufficient contrast between the text and background. For others, bright colors (high luminance) are not readable; they need low luminance.

High contrast is required by some individuals with visual impairments, including many older people who lose contrast sensitivity from ageing. For example, dark text on light background or bright text on dark background.

Dark Text on Light Background

Some people cannot read text if there is not sufficient contrast between the text and background. For others, bright colors (high luminance) are not readable; they need low luminance.

While some people need high contrast, for others — including people with some types of reading disabilities such as dyslexia — bright colors (high luminance) are not readable. They need low luminance.

Light Text on Dark Background

Some people cannot read text if there is not sufficient contrast between the text and background. For others, bright colors (high luminance) are not readable; they need low luminance.

Gray Text on Dark Background

Some people cannot read text if there is not sufficient contrast between the text and background. For others, bright colors (high luminance) are not readable; they need low luminance.

Dark Text on Gray Background

Some people cannot read text if there is not sufficient contrast between the text and background. For others, bright colors (high luminance) are not readable; they need low luminance.

Web browsers should allow people to change the color of text and background, and web pages need to work when people change colors.

This accessibility requirement is sometimes called sufficient "color contrast"; however, that is incorrect — technically it's "luminance contrast."

What to Check

Web pages should have a minimum contrast, by default. A contrast ratio of at least 4.5:1 for normal-size text.

Using Google Chrome

- Download the Color Contrast Analyzer Extension
- Click on the Extension, located in the top right of your page



Additional Resources

http://www.456bereastreet.com/archive/200709/10_colour_contrast_checking_tools_to_improve_the_accessibility_of_your_design/

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Web Accessibility



In this section, the most commonly used **Content Management Systems** for Mason websites will be discussed. Instructions on how to incorporate accessibility with step-by-step instructions are included for content managers and web developers.

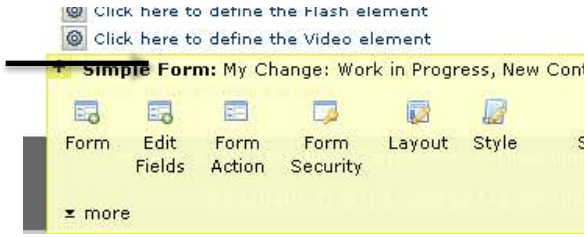
CommonSpot Web Management - Adding Labels to Form Fields

Including Labels on Forms

When building a form on your Common Spot page, it is important to include a label with every form field. When form fields do not explicitly include a label, assistive technologies may incorrectly render the label or provide no feedback at all to users. When labels are not present or are incorrect, users of assistive technologies may not be able to complete a form.

To add labels to form fields, follow the steps below:

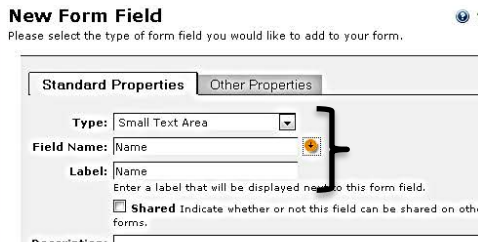
Step 1: After adding the Form Element to your page, click the yellow '+' sign next to the *Simple Form Element* and select **Edit Fields**.



Step 2: Select **Add New Field** in the *Edit Fields* dialog box.



Step 3: In the *New Form Field* dialog box, Select the field type, enter a field name and a label name. When finished, select **Add Field**. (**Please Note:** usually the label name is the same as the field name.)



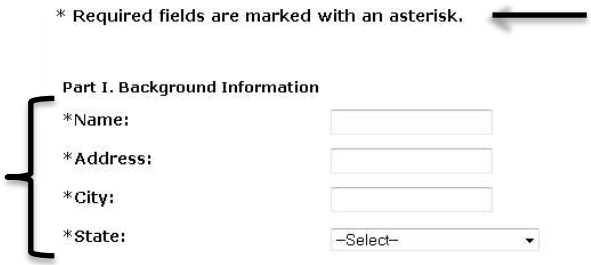
ep 4: You will now see in the *ample Forms* dialog box that the edit ld now has a label:



Forms and Usability

When filling out the *Form Field* dialog box, if the field is going to be required, an asterisk (*) should be placed in front of the field name and the label to let users know that it is required. **For example:** '*Name' would be entered in the Field Name and the Label field if it is a required field.

See the next example for an accessible, usable form. Notice how there is also a note stating that the required fields are marked with an (*) asterisk to let the user know of the required fields.



For more information about how to create a form, contact your web developer.

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CommonSpot Web Management - Heading Structure

Adding Headings

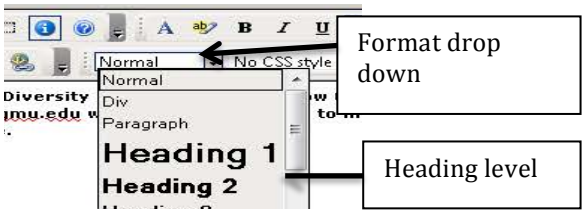
Maintaining a structured heading order is important not only for accessibility, but for search engine optimization as well. When someone uses a search engine to find a specific topic, it pulls in the headings from pages for search results.

To add headings to your Common Spot webpage, follow the steps below:

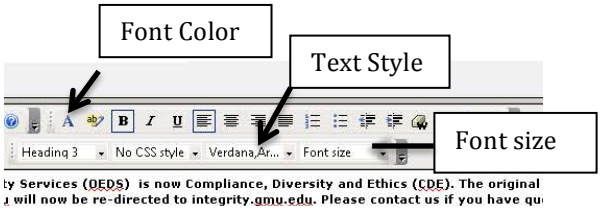
Step 1: In the formatted text box, highlight the text that you want to format as a heading



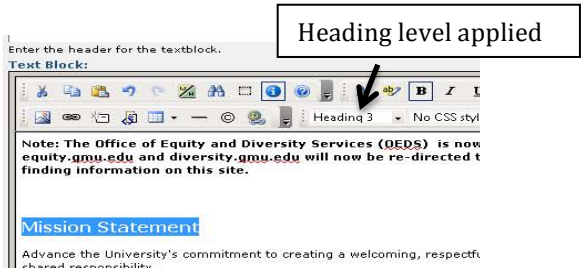
Step 2: In the text box tools, select the Format drop down and select the appropriate Heading level (1, 2, 3, etc…)



Step 3: Once the appropriate heading level is applied, you can change the font size and color of the text. Simply highlight the text again and select the appropriate tools:



Step 4: Once your styles are applied, you can see that the correct heading level is displayed when the text is selected:



Heading Styles

CommonSpot web developers are able to set specific font style, size and color settings for a particular heading format. If you think this would help you in formatting the style of your headings, contact your web developer.

Heading Levels

It is best practice to ensure that heading levels have a meaningful hierarchy and do not skip levels such as H1 to H3. You should always have an H2 before adding an H3. See example below for a structured heading order:

Main Page Title (Heading 1)
- Sub-Heading (Heading 2)
  - Sub-Heading (Heading 3)
- Sub-Heading (Heading 2)
  - Sub-Heading (Heading 3)

Some CommonSpot web pages must have Heading 1 coded by a web developer if the main heading is also the main title of the page. Content managers may not have access to updating this. See example below:



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CommonSpot Web Management - Keyboard Accessibility

Adding Keyboard Accessibility

One of the top best practices for accessibility is keyboard access. In other words, would someone be able to access your website using just the keyboard and not the mouse? This functionality is important for users with visual impairments and mobility impairments who cannot use a mouse.

This can be accomplished by ensuring that elements that utilize device-dependent event handlers (mouse only) are not the sole means of providing dynamic functionality.

Content managers and developers can incorporate this by providing a redundant device-dependent event handler in the code to allow users of assistive technologies a method to access the functionality. If a “Mouse” or “Click” handler is used, an alternative must be added. See below for examples.

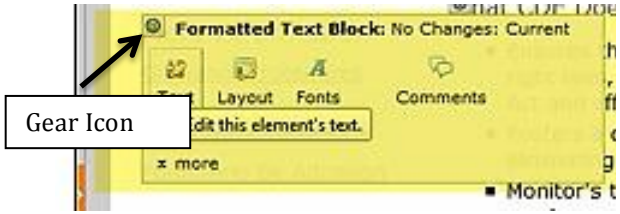
Event Handler	Alternative
OnClick	OnKeyPress
OnMouseDown	OnKeyDown
OnMouseUp	OnKeyUp
OnMouseOver	OnFocus
OnMouseOut	OnBlur
OnDblClick	OnKeyDown

How To Add the Alternative Code

Step 1: When logged into your website, go to **View- Work On This Page (My Changes)**:



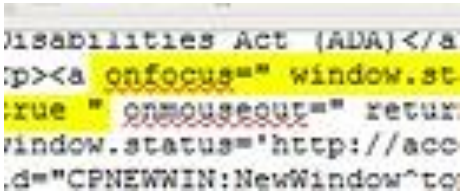
Step 2: Select the gear icon that appears in the upper left corner of the text box, and then select the text button:



Step 3: In the text box, select the **Show/Hide HTML** button:



Step 4: Add the alternative code in the HTML text box. In this case below, the “*On Focus*” was selected since the “*On Mouse Over*” handle was also used with “*On Mouse Out*”:



Step 5: Select the **Show/Hide HTML** button again to go back to the text box.

Code Examples

Non- Accessible Example:

```
<a href="http://www.yahoo.com"
onmouseover="window.status='Go to
the yahoo homepage':return true">
Click here
</a>
```

Accessible Example:

```
<a href="http://www.yahoo.com"
onMouseOver="window.status='Go to
the
yahoo homepage':return true"
onFocus="window.status='Go to the
yahoo homepage':return true">
Yahoo Home Page
</a>
```


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CommonSpot Web Management – Image Description (Alt Text)

What is an “Alt” Text (tag)?

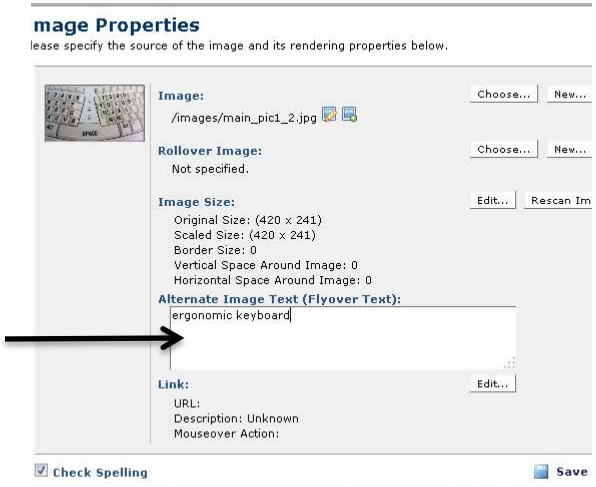
Alt tags are descriptions for images that communicate the meaning of the image to users of assistive technologies and text-only browsers. This is very important for accessibility and is a best practice that should be followed. CommonSpot allows the addition of alternative text for images, but it must be included by the content manager/developer. It is not automatically added.

To add alt tags to images on your CommonSpot page, follow the steps below:

Step 1: Select the gear icon for your image and select Image



Step 2: In the *Image Properties* dialog box, type in the text description in the **Alternate Image Text** field and click **Save** - See next example:



Step 3: You can now check that the alt text has been added by hovering your mouse over the picture, the alt text will appear next to your mouse cursor like the example below.



Decorative Images

An image that is purely decorative and has no meaning should be given an alt

g of a double quote (“”). This will de” the image in the background so at it will not be noticed by assistive hnologies, even though it is still ible on the page. Without this null or ded alt tag, assistive technologies may pick up the image as “blank” or raphic” without any context to the er. The user would not know if this s an image of importance or not.

amples of Decorative Images

Smiley Faces (or Emoticons)



Background images or graphic art

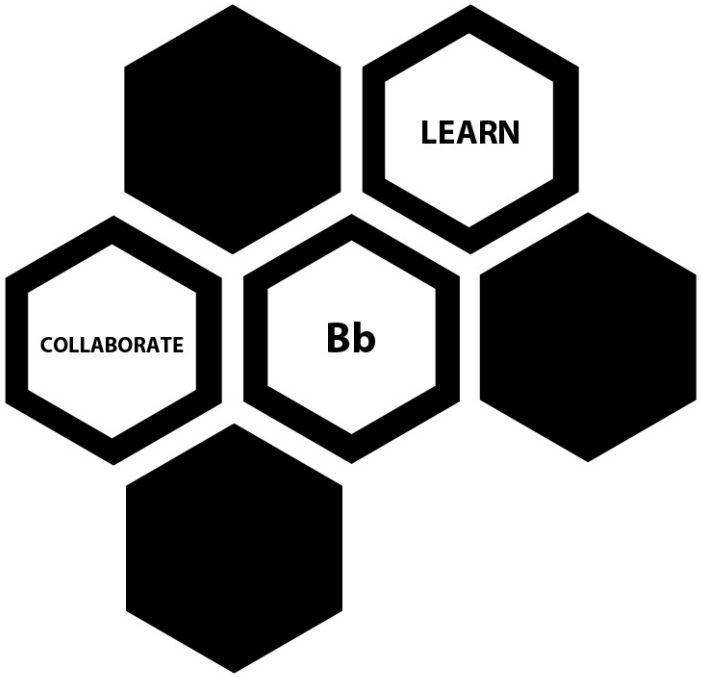


Images that should contain an Alt Tag:

- Social Media Logos
- Mason Logos
- Other images displaying information that describe the context of the webpage
- Pictures that contain text

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Blackboard and Bb Collaborate



In this section, the most commonly used learning management platforms here at Mason, **Blackboard Learn** and **Bb Collaborate**, will be discussed.

The following pages will cover *Blackboard*'s commitment to accessibility, resources for faculty, staff and students on the different built-in features of *Blackboard*, *Bb Collaborate*'s built-in accessibility features, how to enable these features, and resources for the latest *Bb Collaborate* updates.

Adding Headers in Blackboard

About

Blackboard® is usable and accessible. The National Federation of the Blind (NFB) recently awarded Blackboard Learn™, Release 9.1 and later with a Nonvisual Accessibility Gold Certification, making it the first learning management system to achieve certification. Blackboard measures and evaluates accessibility levels using two sets of standards: the *Web Content Accessibility Guidelines (WCAG)* issued by the World Wide Web Consortium (W3C) and *Section 508 of the Rehabilitation Act* issued in the United States federal government.

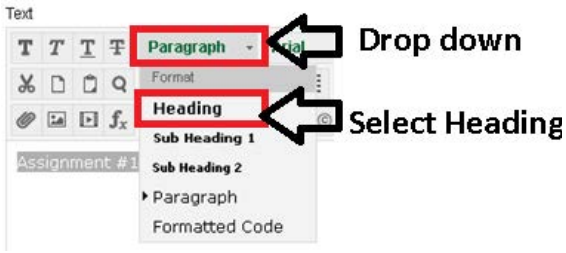
How it Works

Blackboard is fairly accessible out of the box. It is up to the faculty member to continue the accessibility when creating Modules, Items, etc. within the course. When creating a new Module or other Learning Content you will often see the WYSIWYG (what you see is what you get) edit box where you can add content. When adding content to courses, there are multiple ways you can include accessibility.

Let's begin by looking at adding Headers. Headers should be used in a logical order starting with Header 1 (H1), H2, H3, etc. Headers should not jump from H1 to H3.

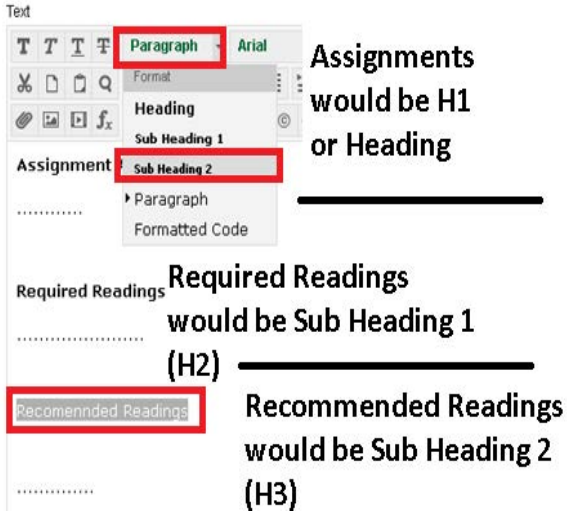
Adding Accessibility

When you add content into the WYSIWYG box, select the text that would be the header and go to the **Formatting** Drop Down Menu to select the appropriate header.



This feature should be used throughout all Modules created. Each Module would follow the same setup from H1 – H3, etc.

Here is an example of multiple headings used:



Additional Resources

Accessibility Features in Blackboard:

http://www.blackboard.com/Platforms/Learn/Resources/Accessibility/Accessibility-Resources.aspx

Accessibility for individuals using Assistive Technology:

http://www.blackboard.com/Platforms/Learn/Resources/Accessibility/JAWS-Demo.aspx

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2-24-2014

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Adding a Table and Setting Table Headings in Blackboard

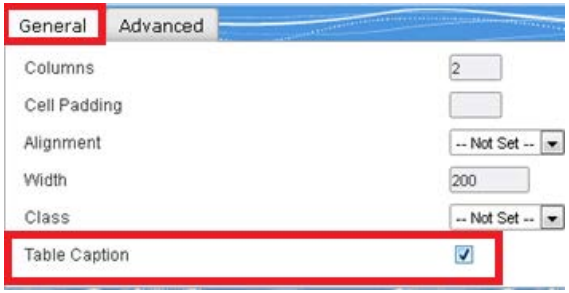
How it Works

Blackboard is fairly accessible out of the box. It is up to the professor to continue the accessibility when creating Modules, Items, etc. within the course. When creating a new Module or other Learning Content you will often see the WYSIWYG (what you see is what you get) edit box where you can add content. When adding content to courses there are multiple ways you can include accessibility.

Let's begin by looking at adding Tables. There are two types of tables (1) data and (2) layout/presentation. Data tables don't necessary have to have numbers to be considered "Data". Any table presenting information that has a set header that would follow through the rows and columns would be considered a Data table. All Data tables need headers set in the Row and Column headers. These headers should always be set as Header (H1)

Adding Accessibility

When you add a Table in a Module the **Insert/Edit Table** box opens. Check the "*Table Caption*" at the bottom of the **General** Tab.

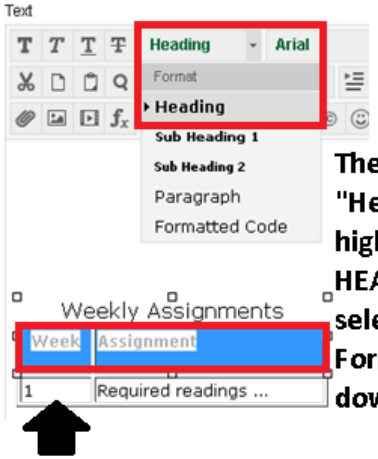


Then move to the **Advanced** tab. It is good to create information/summary about the table. Be sure to set the language direction. We read top to bottom and left to right. So the language direction would be left to right.



Once you have created the specifics of your table, hit **Insert**. The table will show up in your Module.

To set the Table Headings – Highlight the top Row (and far side Column if applicable). Use the **Format** Drop Down Menu and select **Heading**.



The Row "Headers" are highlighted and HEADING is selected from the Format drop down menu

Ideally, the Column "Headers" would also be selected these would be the week numbers 1-16, and also set as HEADING.

Additional Resources

Accessibility Features in Blackboard:

http://www.blackboard.com/Platforms/Learn/Resources/Accessibility/Accessibility-Resources.aspx

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Adding an Image and Tagging/Describing in Blackboard

How it Works

Blackboard is fairly accessible out of the box. It is up to the professor to continue the accessibility when creating Modules, Items, etc. within the course. When creating a new Module or other Learning Content you will often see the WYSIWYG (what you see is what you get) edit box where you can add content. When adding content to courses there are multiple ways you can include accessibility.

Let's begin by looking at adding Images. There are two types of images (1) meaningful/important information and (2) presentation/show. All images need "tagged" or described. It depends upon what type of image as to the type of tag used.

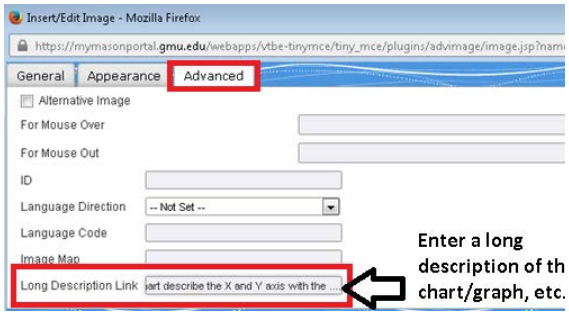
Adding Accessibility

When you add an Image in a Module the Insert/Edit Image box opens. Under the general tab you select the location of your image. You *MUST* enter a description. Entering a Title is helpful but should not be identical to the description.



If the image is meaningful/important then enter the description of the image in the box. If the image is for presentation/show then enter an open and closed quote "".

If the image is a chart, graph or other complex image that needs a detailed description click on the Advanced tab of the Insert/Edit Image box.



Here you have an area that you can either enter in a long description describing the chart or graph.

Additional Resources

Accessibility Features in Blackboard:

http://www.blackboard.com/Platforms/Learn/Resources/Accessibility/Accessibility-Resources.aspx

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Adding a Description to a File in Blackboard

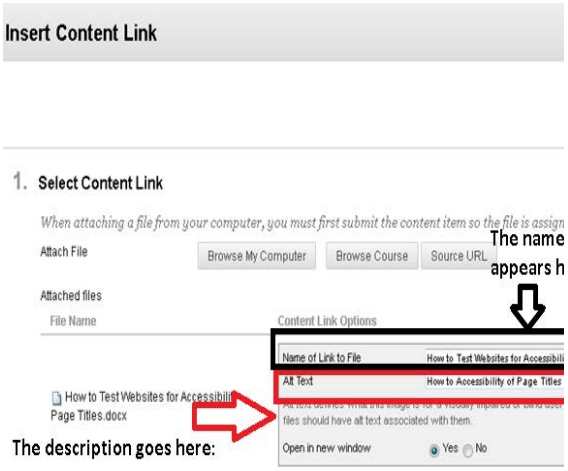
How it Works

Blackboard is fairly accessible out of the box. It is up to the professor to continue the accessibility when creating Modules, Items, etc. within the course. When creating a new Module or other Learning Content you will often see the WYSIWYG (what you see is what you get) edit box where you can add content. When adding content to courses there are multiple ways you can include accessibility.

Let's begin by looking at adding Files.

Adding Accessibility

When you add a Document in a Module the Insert Content Link box opens. Once you browse and find the file you want to attach, the name of the file will automatically appear. The alt Text should be a description of the file.



Accessible Documents

By adding a description does not make the document accessible once it is opened. To make sure a document is accessible it should be OCR'd (made searchable). This not only helps with accessibility but also helps ESL students, and non-traditional students.

Additional Resources

Accessibility Features in Blackboard:

http://www.blackboard.com/Platforms/Learn/Resources/Accessibility/Accessibility-Resources.aspx

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Adding a Video in Blackboard

How it Works

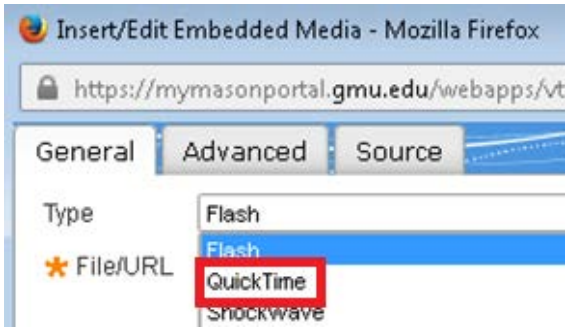
Blackboard is fairly accessible out of the box. It is up to the professor to continue the accessibility when creating Modules, Items, etc. within the course. When creating a new Module or other Learning Content you will often see the WYSIWYG (what you see is what you get) edit box where you can add content. When adding content to courses there are multiple ways you can include accessibility.

Let's begin by looking at adding Videos.

Adding Accessibility

There are two ways to add a video (1) through an item, module, etc. (2) directly adding it into the **Build Content** section by selecting **Video**. It is best practice to add a video through an item, module, etc.

When in the Item or Module, select the **Embed or Add Video** button. Here, you can choose what type of file you would like to add. It is best practice to use QuickTime and avoid the use of iframe and flash. Also, whichever file format you choose, a download link of that application should also be added in the module. For example, if QuickTime is used add a "Download QuickTime" link.



Using the Item or Module option allows you to add a description of the video within the WYSIWYG edit box. You can also include a file for a transcript and a link where someone can download the video and/or open it into a new window. (**NOTE:** Embedded videos are not always accessible to screen readers so it is best to give the link in addition to the embedded video.)

The second way you can add a video is by directly adding it into the **Build Content** Section. When doing this the video will automatically show up at the bottom of all content in Blackboard and it would need to be moved to the appropriate location.



By default**, Video Options** include *Autostart*, *Loop* and *Add alignment to content* checked as "No". Maintain these settings.

You can easily add a Transcript for the video/audio. Select the Browse Button to Include a Transcript:



NOTE: Adding a transcript doesn't make the video fully accessible, but does help add additional support for all students.

Additional Resources

Don't have a transcript? Visit ATI's Accessible Media website for a free transcript and captioned video: http://ati.gmu.edu/media.cfm

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Blackboard Collaborate Web Conferencing - Built In Accessibility Features

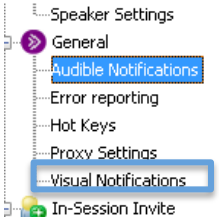
Blackboard Collaborate offers built-in features that are an integral part of the program but also aid in accessibility. These are more universal design features that can help anyone in the collaborate experience, but may be especially helpful for someone with a disability.

Audible/Visual Notifications

These are system messages used to notify users when important events occur within the session. The following audible notifications should always be enabled and the default visual notifications should always be checked:

- Chat Message Received
- Microphone On/Off
- Hand Raised/Lowered
- Participant Joined/Left
- Private Chat Message Received

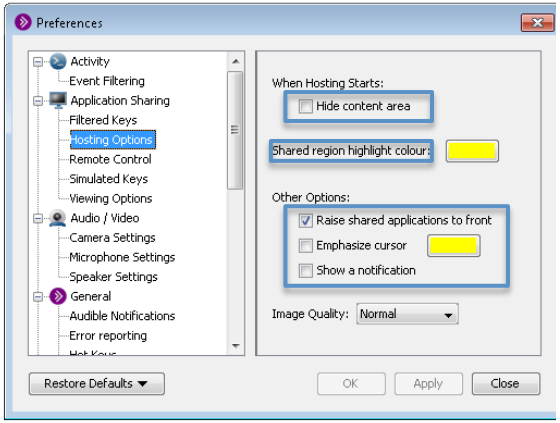
To enable these features, from the Edit menu, select **Preferences**. This will bring up a *Preferences* dialog box. Under General, select **Audible Notifications**:



Application Sharing Features

The following sections describe features that improve accessibility for low vision and color blind users:

Hosting Options: The Hosting Options allow you to define how to display the Application Sharing window while you are hosting an Application Sharing session. To access the Hosting Options, open the *Preferences* dialog box (from Edit Menu) then on the left side of the dialog box, you will see **Hosting Options**:



It is recommended to keep the Hide content area un-checked, select a region highlight color (bright, bold colors such as yellow, orange or blue), keep Raise shared applications to front checked, select emphasize cursor (will display a colored ring around your cursor so that it's more visible and easy to follow) and check **Show Notification** (this will bring up a dialog box to let users know you are about to share an application). Make these changes to your options and click **Apply** and **Close**.

Messaging Chat Options

You can set the font size of the text in the conversation (messaging) pane anywhere from 7 points to 109 points, in increments of 2 points. The default value is 13 points. To increase/decrease the font size, do one of the following:

- From the **Tools** menu, select **Chat** and then **Increase Font Size**.
- From the **Chat Options** menu, select **Increase Font Size**.

Changing the Notes Text Size

You can change the size of the font in the Notes text editor:

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Blackboard Collaborate Web Conferencing - Built In Accessibility Features

1) To open the notes text window, go to Window in the menu bar, click **Show Notes**.
2) Or to open the notes window, press **Ctrl + E**.

Closed Captioning (CC)

The Closed-Captioning feature enables a session attendee to transcribe audio information while a session is in progress.

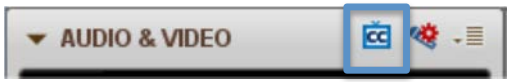
Other session attendees can view the transcribed text in the live session and in a recording of the session. It can also be saved to a text file. There are two types of Closed-Captioning windows: one for entering closed-captioning text (input window) and one for reading the text (view-only window).

Granting CC Permission

The Closed-Captioning permission is not included in the default set of Global permissions – not even for Moderators (including yourself). Before Moderators and Participants can enter text in the Closed-Captioning input window, you must explicitly grant them the Closed-Captioning permission

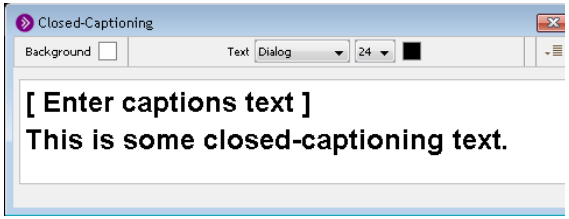
1) To grant permission: Select the **Closed Captioning permission** icon in their participant menu.

2) When they are granted permission, they will see the *CC* icon in their menu bar.



Entering CC Text

Once you have been given permission to enter the closed-captioning text, open the *Closed-Captioning* input window by doing one of the following:
• Click on the **Closed-Captioning** button at the top of the Audio & Video panel.
• From the Window menu, select Show **Closed-Captioning**. The *CC* box will come up:



Viewing CC Text

All Moderators and Participants, upon joining a session have the permission to view the text in the Closed-Captioning window. To open the Closed-Captioning view-only window, do one of the following:

• Enter **Control+F8** (**Command-F8** on Mac)
• From the Window menu, select **Closed-Captioning**.
• If someone in the session has been granted the permission to enter captions, you will see the **Closed-Captioning** button at the top of your Audio & Video panel. Click on it to open the view-only window.

Saving CC Text

• You can save the closed-captioning text by selecting Save from the Options menu in either of the Closed-Captioning windows (input or view).
• Each time you close the Closed-Captioning window a new transcript is started, so only the captions that were entered since the last time you opened the window will be saved.

For full details on 'CC' in Collaborate and all of the accessibility features, see the online moderator's accessibility guide:

http://library.blackboard.com/ref/483c05b6-f353-4187-b294-ebe11f5e5bca/index.htm

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Lecture-Capture Tools and Accessibility



In this section, general accessibility information is provided concerning three lecture capture solutions that are commonly used by faculty on Mason campuses: **Adobe Presenter**, **Camtasia**, and **Adobe Captivate**.

Additionally, alternative options are provided to ensure equivalent access to the course content and additional resources to improve the accessibility of your lecture capture videos.

Lecture-Capture Tools - Camtasia, Captivate, and Presenter Accessibility

Note: The purpose of this page is to provide more detailed accessibility information regarding these three commonly used lecture capture solutions on Mason campuses: *Adobe Presenter*, *Techsmith Camtasia*, and *Adobe Captivate*. Additionally, alternative options for ensuring equivalent access to the course content and additional resources are provided.

Accessibility Challenges*

***Note:** The following information relates to the final output (i.e., video) of the application, **not** the authoring tools.*

Users of assistive technology (i.e., screen-reading, screen magnification, captions) will be impacted by the following:

- Very limited keyboard access - Only the *Play*, *Pause*, and *Slider Positioning* buttons can be accessed by keyboard. ***[Camtasia]***
- Screen-reading applications are unable to identify any of the Camtasia video player controls. ***[Camtasia]***
- Alternative text descriptions must be provided for interactive video elements (i.e., callouts, buttons, questions, etc.) ***[Captivate]***
- Some of the video player controls are available in high-contrast settings. ***[Camtasia]***
- Interactive elements (i.e., quizzing and surveys) cannot be accessed by users of assistive technology (i.e., screen-reading applications) ***[Camtasia]***
- Captions must be added manually in order for individuals who are deaf or hard of hearing to access the content. ***[Both]***

Populations Likely Impacted

- Individuals with **visual** impairments
- Individuals who are **deaf or hard of hearing**

Alternative Options for Providing Equivalent Access

1. Provide users with an accessible PowerPoint version of the presentation.
    - Add word-for-word text transcript to notes section for each slide
    - Limit use of animations and transitions
    - Add alternative text descriptions for images/charts/graphs
    - Provide unique titles for each slide
    - Use pre-designed slide layouts, as much as possible
2. Export Camtasia video as *.mp4 format, enabling students to play the video in whatever video playback application they choose.
3. Export Camtasia video as *.mp4 format and submit for captioning/transcription, http://ati.gmu.edu/acc-media-form.cfm.

Additional Resources

- Adding Speech-To-Text Captions
- Sync Captions with Script
- Add Captions Manually
- Importing/Exporting Captions
- Making Videos Searchable
- Accessibility Best Practices for Adobe Captivate
- Building an Accessible PowerPoint Presentation (Presenter)

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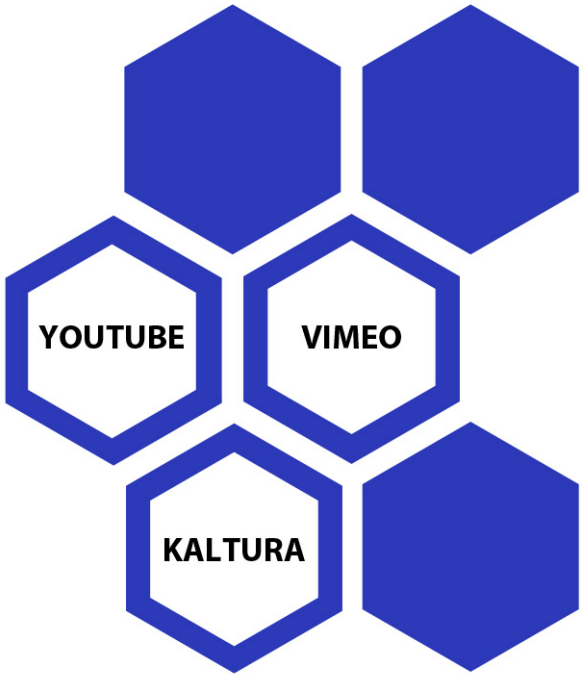
Comparison Chart – Lecture Capture Accessibility

	About	Accessible to Individuals with Sensory impairments?	
		Hearing	Vision
Adobe Presenter	***Presenter*** differs from Camtasia and Captivate in that it installs as a plug-in to Microsoft PowerPoint. Users can add narration to PowerPoint slides, import audio/video content, and have the option of creating a survey or quiz at the end of a presentation.	**Yes*** (Starting with v8, captions can be added manually or with built-in speech-to-text functionality.)	**Yes*** (Author must follow best practices for building accessible PPT presentation.)
Camtasia	***Camtasia*** is a screen recording and video editing software application. It is used extensively for computer simulation and training exercises. It can be installed on both a Mac and a PC. However, there are some notable differences between the two applications (View comparison chart).	**Yes*** (Captions must be added manually.)	**No*** (Videos shown using *Camtasia Player* and interactive elements, like quizzes, are inaccessible to screen-reader users. Choose alternative strategy for delivering quizzes. Videos should be exported and shown using an **accessible video-playback application**.)
Captivate	***Captivate*** is a screen recording and video editing software application. While similar to Camtasia and Presenter in many ways, it is much more robust. Consequently, it is also more expensive than the two previous applications. It offers a great deal more accessibility support as well. It can be installed on both a Mac and a PC.	**Yes*** (Captions must be added manually.)	**Yes*** (Captivate projects are accessible to screen-reader users. Follow the link above for best practices for making accessible Captivate presentations.)

* - Links above will take you to 3rd-party websites with detailed information on incorporating accessibility into your lecture capture videos

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Making Your Videos Accessible



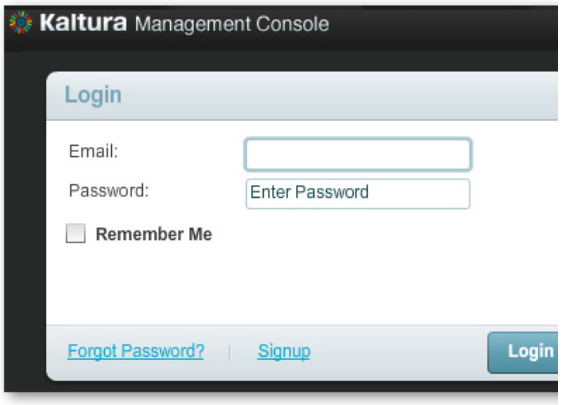
Kaltura, Vimeo, and ***YouTube*** are the most commonly used applications by Mason faculty for hosting web-based videos.

In this section, general accessibility information is provided concerning how to ensure that your videos are accessible to individuals who are deaf and/or blind.

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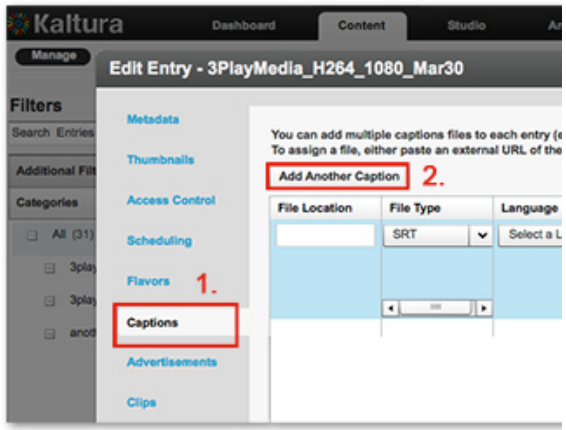
Kaltura – Manually Add Captions to Your Kaltura Video

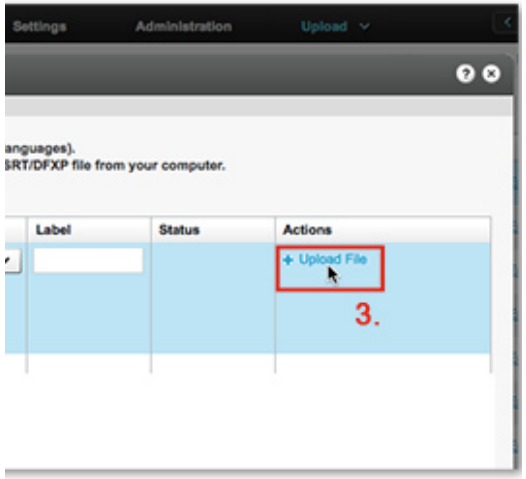
1. **Log into Kaltura Account**



2. **Select the video to be captioned.** At the top of the page, click on the **Content** tab and select the video to which you want to add captions. Click on the video's name (highlighted in blue) and a pop-menu called **Edit Entry** will appear.

3. **Upload your SRT file.** In the **Edit Entry** menu, click on the **Captions** tab on the left-hand side. Next click **Add Another Caption**. Then under the **Actions** column, click **Upload File**. Select your SRT file.





4. **Finally,** select the language and click ***Save*.**

Turning Captions/Audio Description On/Off

All Mason videos are played using Kaltura's 508-compliant video player.

The player includes:

- Support for captions file in timed text or SRT formats for the video/audio file
- Support for an audio description in a standardized format for the video/audio file
- Hidden text elements for every non-text element (for screen readers)
- Tooltips
- Keyboard tabbing and controls
- High contrast controls

Turn *captions/audio description* on or off by clicking the 'CC' and/or 'AD' buttons, respectively. They appear when you hover your mouse on the top right-hand side of your video.

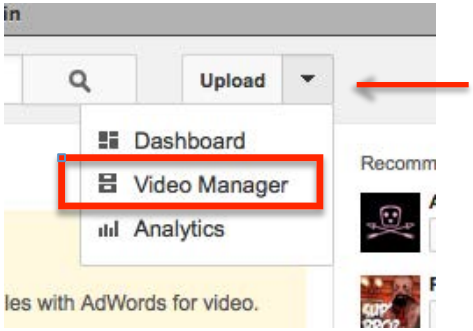


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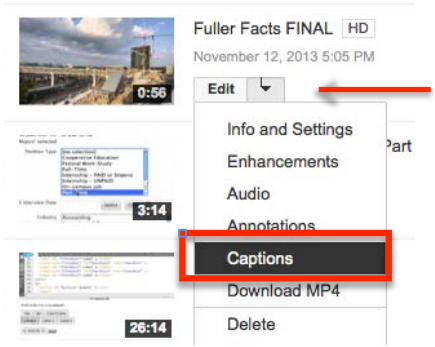
YouTube – Adding Captions Files or Transcripts

1. Log into your **YouTube** Account.

2. Click the drop-down menu next to the Upload button and then click. Video Manager.



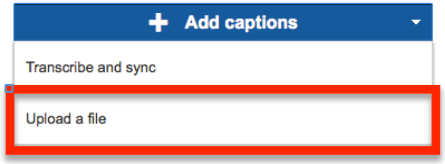
3. Visit your Video Manager and click the **drop-down menu** next to the "Edit" button for the video you'd like to add captions to. Next, click **Captions**.



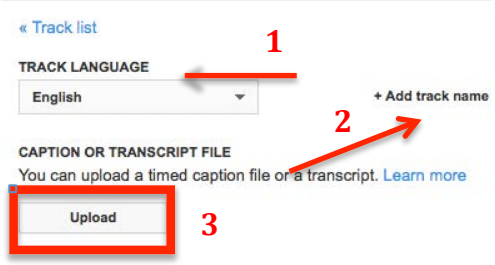
4. If you haven't added captions before, click the **Add captions** button. Or, if you've already added a caption, click the **Add a new track** button

Uploading Captions Files to Videos

1. After following the previous steps, select **Upload a file.**



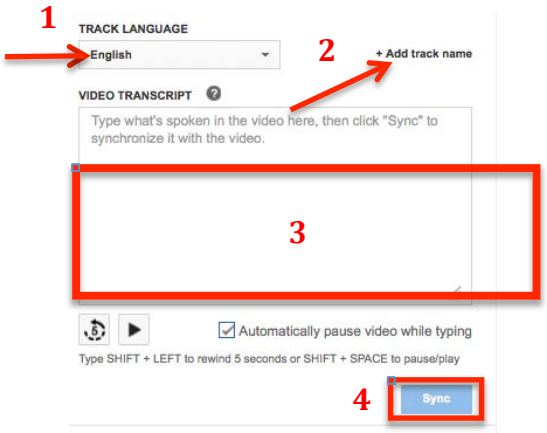
2. Set your track language. If you'd like you can also add a track name, then click **Upload.**



3. Select your caption or transcript file and click **Open**.

Transcribing and Syncing Text file

1. Following the previous steps, but select **Transcribe and sync,** instead of **Upload.**
2. Set your track language. If you'd like you can also add a track name, then click **Upload.** Type or copy and paste your transcript into the text box. Once your finished, click **Sync**.



Turning Captions On/Off

1. Open your YouTube video.

2. Under the video, click 'CC', click 'On', and then select 'English' from the track list.



3. To turn off captions, click 'CC' again.

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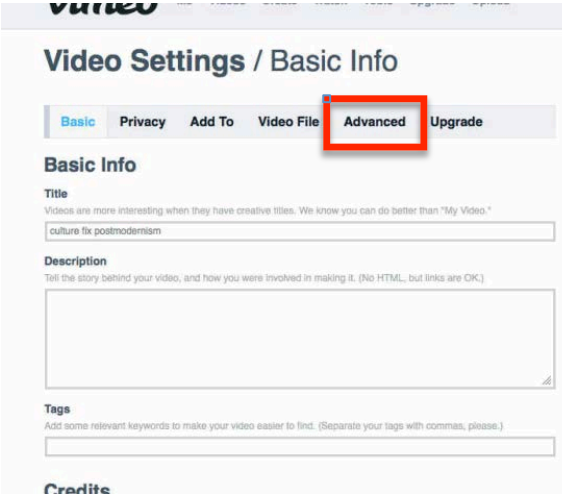
Vimeo: Adding Captions and Subtitles

1. Log into your **Vimeo** Account, http://www.vimeo.com

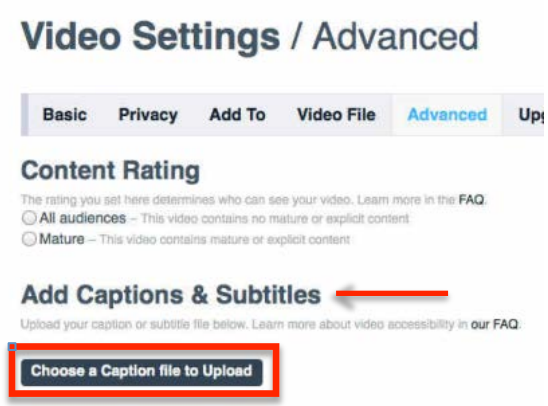
2. Select the video that you would like to add captions/subtitles to and then click the **Settings** button.



3. Next, click the **Advanced** link.



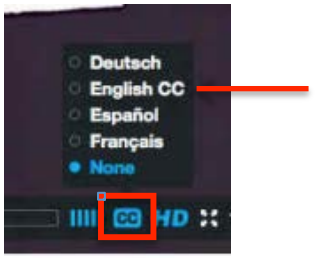
4. Under **Add Captions & Subtitles**, click the **Choose a Caption file to Upload** button. [**NOTE:** Vimeo currently supports SRT, WebVTT, DFXP/TTML, SCC, and SAMI files.]



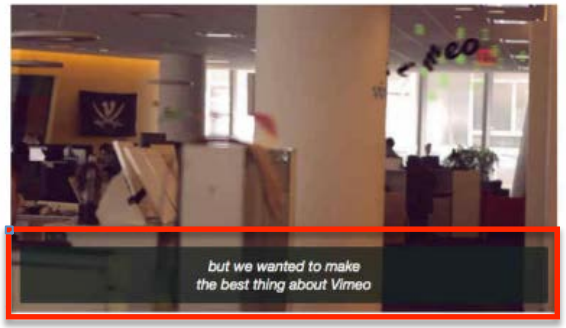
5. Once the file is uploaded, check the box to activate it. Uncheck the box to deactivate the file, or click the red x to delete it entirely.

Turning on Captions or Subtitles

1. To turn on captions or subtitles when viewing a video, click the CC button in the player's bottom toolbar. In the menu that appears, select the caption or subtitle track you'd like to see.



2. When the video plays, the captions will overlay your video at the bottom of the screen.



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Definitions

1. **Alt Tag** - Text used to describe an image. Example, the alt text for the GMU logo would be "George Mason Logo". This is what a screen reader user would hear when navigating to the logo.
2. **Anchor** - The text a link uses to refer to a website. This can make a big difference in a website's search engine results.
3. **Attribute** - Links, tables and frames all have attributes. The attribute specifies extra information about an element such as a link or table title or a frame description.
4. **Bookmark** - A bookmark (aka "favorite") is a marker placed on web pages and files. A bookmark would be useful to return to the page or file later or to recommend the page or file to someone else.
5. **Content Management System (CMS)** - The Content Management System (or CMS) is a backend tool for managing a site's content that separates said content from the design and functionality of the site. Using a CMS generally makes it easier to change the design or function of a site independent of the site's content. It also (usually) makes it easier for content to be added to the site for people who are not designers.
6. **Dialog Box** - A box that appears on a display screen to present information or request input i.e. Search Box.
7. **Drag and Drop** - Clicking on an icon or selection, holding the mouse button down and moving the mouse to 'drag' the selection to a new location. When the mouse button is released the item is 'dropped'.
8. **Element** - In XML, an element is the central building block of any document. Individual elements can contain text, other elements, or both.
9. **Form Fields** - Term for fields in a fillable form. Examples include First Name, Last Name, Phone Number, Email, etc.
10. **Homepage** - The 'front page' of a website.
11. **IE** – Stands for "***Internet Explorer.***" One of the most popular web browsers, designed by Microsoft.
12. **JAWS** - Stands for "***Job Access With Speech.***" Provides users who are visually impaired access to a computer through text-to-speech. Reads everything on the computer screen.

Definitions

13. **NVDA** - Stands for "***Non-Visual Desktop Access.***" Free screen-reading application. Provides users who are visually impaired access to a computer through text-to-speech. Reads everything on the computer screen.
14. **Navigation** - Refers to the system that allows visitors to a website to move around that site. Navigation is most often thought of in terms of menus, but links within pages, breadcrumbs, related links, pagination, and any other links that allow a visitor to move from one page to another are included in navigation.
15. **Plugins** - A special kind of web browser add-on. Plugins are essentially required add-ons, if viewing very specialized web pages. Examples include: Adobe Flash or Shockwave player, Microsoft Silverlight player, and Adobe Acrobat PDF reader.
16. **Tabindex** - The tabindex attribute specifies the tab order of an element (when the "tab" button is used for navigating).
17. **Template** - A file used to create a consistent design across a website. Templates are often used in conjunction with a CMS and contain both structural information about how a site should be set up, but also stylistic information about how the site should look.
18. **URL** - Stands for "***Uniform Resource Locator."*** The technical term for the address of a website or document on the web. For example, www.ati.gmu.edu is a URL.
19. **Usability** - Refers to how easy it is for a visitor to use a website in its intended manner.
20. **WAT** - Stands for ***Web Accessibility Toolbar***. It is a free toolbar, developed by the Paciello Group, that can be installed in IE for testing accessibility of webpages.
21. **Web Standards** - Specifications recommended by the World Wide Web Consortium for standardizing website design. The main purpose of web standards is to make it easier for both designers and those who create web browsers to make sites that will appear consistent across platforms.
22. **WYSIWYG** – Stands for "***What You See Is What You Get***". A WYSIWYG editor is one that enables the user to see on the computer screen exactly what will appear when the document/webpage is finished. It eliminates the user's need to know how to manipulate programming code (e.g., HTML).

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Where Innovation Is Tradition

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